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ABSTRACT

A self-administered questionnaire was mailed to all school principals in Ontario asking them to indicate which of 55 vandalism prevention measures they had used; how effective each had been in reducing vandalism; the cost of vandalism during 1978; whether they have an alarm system and a vandalism-reporting system; and what community groups the school has involved in vandalism prevention measures. Among the most-used and most effective measures, according to the 3025 respondents, were providing adequate teacher supervision in hallways and lunch rooms, and keeping schools clean and attractive. One of the most effective measures, in the opinion of the principals, was installing an alarm system, although over one-third of the principals reported they already had one. The findings are discussed in terms of which measures are most effective, the cost of school vandalism, and how to use the findings. The need for developing more behavioral programs and better cost-reporting systems, and ways of utilizing the results of the study are outlined. (Author/MLF)

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VANDALISM PREVENTION PROGRAMS USED IN ONTARIO SCHOOLS

JAMES WHITE, Principal Investigator
Anita Fallis

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Hon. Bette Stephenson, M.D., Minister
Dr. H. K. Fisher, Deputy Minister

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ABSTRACT

InfoResults Limited investigated vandalism prevention measures and programs used in Ontario schools. A self-administered questionnaire was mailed to each school principal in Ontario asking them to indicate which of fifty-five vandalism prevention measures they had used; how effective each had been in reducing vandalism; the cost of vandalism during 1978; whether or not they have an alarm system and a vandalism-reporting system; and what community groups the school has involved in vandalism prevention measures.

Use of vandalism prevention measures by the 3025 respondents ranged from less than 1% to 95%. Similarly, the perceived effectiveness of the measures also varied substantially. Among the most-used and most effective measures were: providing adequate teacher supervision in hallways, lunch rooms, etc; keeping schools clean and attractive; used and least effective included: installing signs identifying the school's boundaries; providing rewards to students or community residents who informed on vandals; and signing all school visitors in and out of the building. One of the most effective measures, in the opinion of the principals, was installing an alarm system, although over one-third of the principals reported they already had one.

Issues related to school vandalism that were also investigated were the cost of vandalism, vandalism-reporting systems, and the use of community groups to prevent vandalism. The cost estimates should be treated with caution since only 2703 principals made estimates and there were wide variations because of the effect of arson. The average cost per school in 1978 was $1,730 or $4.05 per student. Preliminary estimates of the costs of various types of vandalism are presented along with estimates based on school level and school size.

Over four-fifths of the principals said their school had a vandalism-reporting system. School level did not determine the presence of a reporting system, but fewer of the very small schools than the other schools made regular reports to their board.

The use of outside agencies to combat school vandalism was relatively high for police, parent groups, and individual parents, but very low for all other community groups and agencies.

The findings are discussed in terms of which measures are most effective, the cost of school vandalism, and how to use the findings. The need for developing more behavioural programs, better cost-reporting systems, and ways of utilizing the results of the study are outlined.

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TABLE OF CONTENTS

Introduction	1
Literature Review	2
Research Methods	6
Research Design	6
Questionnaire	6
Data Collection	7
Data Analysis	7
Sample Characteristics	7
Findings	9
Vandalism Prevention Measures Used	9
Overall Use Levels	9
Use by School Level	15
Use by School Size	16
Overall Effectiveness Ratings	21
Effectiveness by School Level	22
Effectiveness by School Size	23
Use and Effectiveness	23
Other Prevention Measures	26
Alarm Systems	28
Vandalism-Reporting System	29
The Cost of School Vandalism	30
Total Cost	30
Cost per School	31
Cost per Student	32

Involvement of Community Groups or Persons 32

Discussion 34

Vandalism Prevention 34
The Cost of Vandalism 36
Using the Findings 36

Summary 38
Background 38
Findings 38
Vandalism Prevention Measures 38
Effectiveness of Measures 43
Use and Effectiveness
Alarm Systems 45
Vandalism-Reporting System 46
The Cost of School Vandalism 46
Community Groups 47

Discussion
Vandalism Prevention 47
The Cost of Vandalism 47
Using the Findings 48

References 49

Appendix 1: Questionnaire 51

Appendix II: Additional Tables 61

LIST OF TABLES

Table 1:	Percentage of Schools Using Preventive Measures and Average Effectiveness Scores	1 - 2
Table 2:	Average Effectiveness Score for Preventive Measures Used	3 - 5
Table 3:	Categorization of Preventive Measures	6 - 9
Table 4:	Total Cost of Vandalism on a per School Basis	10 - 13
Table 5:	Involvement of Community Groups or Persons	14 - 17
Table 6:	Type of Alarm System by School Level and School Size	18
Table 7:	Total Cost of Vandalism by School Level	19
Table 8:	Total Cost of Vandalism by School Size	19
Table 9:	Involvement of Community Groups or Persons to Reduce School Vandalism by School Size	20
Table 10:	Involvement of Community Groups or Persons to Reduce School Vandalism by School Level	20

INTRODUCTION

A literature review of school vandalism prevention programs and activities was completed by InfoResults Limited for the Ontario Ministry of Education in 1978. This report, School Vandalism: Problems and Responses, reviewed the literature on school vandalism prevention programs which have been used by school systems in Canada and the United States. Procedures that educators might use to reduce intrusion, theft, and damage were outlined.

As a follow-up to School Vandalism: Problems and Responses, InfoResults Limited was asked by the Ontario Ministry of Education to conduct a survey of vandalism prevention programs used in Ontario schools. This study provides a measure of the types of prevention programs that have been used during the twelve months prior to the survey and the principals' perception of the effectiveness of the programs. The study also investigates the extent to which other community organizations have contributed to vandalism prevention at the school level and provides an estimate of the cost of vandalism during the 1978 calendar year.

LITERATURE REVIEW

Over the last few years there have been many studies of the extent, causes, and characteristics of vandalism (2, 3, 7, 9, 10). Most studies have concentrated on general vandalism as opposed to school vandalism and the causes of vandalism rather than preventive programs.

A literature review which covered both the causes of school vandalism and preventive measures was completed by the Edmonton Public School Board. The preventive measures described included building design and school security systems. The review also discussed the underlying causes of vandalism: psychological, sociological, educational, and structural. Measures that have been tried in schools and considered effective in reducing vandalism include:

a) student patrols;
b) security officers on twenty-four-hour duty;
c) parent patrols;
d) "vandal watch" programs;
e) acrylic glass;
f) educational programs;
g) development of community schools and community involvement in the appearance of the school building;
h) broadening student involvement in decision making; and
i) rewarding students for preventing vandalism.

The proposed measures that have been tried with mixed success include:

a) alarm systems;
b) holding parents financially responsible for damage; and
c) trained guard dogs (4).

A literature review by White and Fallis (11) presented a classification system of vandalism problems and prevention programs which have been used by school systems in Canada and the United States. Programs involving students, teachers, the school system, and the community were discussed in terms of reducing general school vandalism. Specific responses to intrusion, theft, and damage were outlined. The effectiveness of the various programs was stated, if known, but very few reports of experimentally controlled studies designed to evaluate the effectiveness of antivandalism programs were found. This review makes several references to a book on the prevention of vandalism, Stopping School Property Damage by J. Zeisel. It focusses on designing schools to reduce their susceptibility to damage by vandals (12).

Various preventive measures and their effectiveness were measured in surveys conducted by the Edmonton Public School Board and the Canadian Education Association (5, 6, 3). The Edmonton survey asked principals, school staff, and head custodians to indicate which of twenty-four preventive measures were used in their school and how effective each measure was in reducing vandalism. The effectiveness was measured using a Likert-type scale with the following five response categories: not at all; slightly; moderately; very effective; and completely eliminated problems.

The measures most frequently used to combat damage/loss were: adequate key control; adequate teacher supervision; parental restitution; having students leave the school building at the completion of classes; and removing all monies from the school. The measures indicated as most effective by the three groups of respondents were: adequate supervision of school rentals; adequate teacher supervision; removing all monies from school; adequate key control; and having students leave the school at the completion of classes (5).

The Canadian Education Association surveyed forty-seven school boards across Canada to investigate factors related to school vandalism and the effectiveness of vandalism prevention measures. They asked a board representative to rate thirteen measures on a Likert-type scale with values from 1 to 9 where 1 meant little or no beneficial effect and 9 meant the measure was highly effective. It was found that 80% of the responding boards replaced some broken windows with break-resistant glazings; 75% used exterior lighting; 67% left some interior lights on; 65% installed window screens; 60% periodically picked up stones from school grounds; and 60% had an electronic alarm system. The other measures signs, patrols, appeal to community, and student co-operation were used by fewer than 60% of the respondents.

In general, the effectiveness scores were medium to low, except for electronic alarm systems which received a very high effectiveness rating.

A few researchers have investigated the cost of school vandalism (1, 3, 5, 6, 10). Schott (10) studied the cost of vandalism in Alberta schools. Each school area was surveyed in 1975 to determine the extent of damage due to vandalism during 1974. The total cost and a breakdown by four categories of damage (glass, building and contents, theft, and arson) were reported. Cost differences were found among schools within a jurisdiction, as well as between public and separate, urban and rural systems. For each of the four categories of damage studied, the following comparisons were made on a per pupil basis: urban and rural; public and separate; public-urban and separate-urban; and public-rural and separate-rural. In all but two instances the public school costs per pupil exceeded the separate school costs per pupil. Similarly, for each type of damage the cost per pupil in urban schools exceeded those for rural schools.

The Canadian Education Association survey of forty-seven school boards across Canada investigated the dollar cost of window breakage and other vandalism for the years 1971-75 inclusive. The cost of window breakage was reported on a per pupil basis for several boards, but the majority of the boards could not estimate other vandalism (3).

A survey of British Columbia school districts estimated the total cost of vandalism for the twelve-month period ending June 30, 1976. The per pupil rate was calculated by region, size of district, existence of vandalism programs, etc. (1). A tentative finding that school districts that have vandalism preventive programs have slightly lower vandalism rates than those which do not was reported.

The Edmonton Public School System study collected information on damage/loss from the custodians over a twelve-month period during 1976. The data was analyzed in terms of monthly costs, the time of day incidents occurred, type of damage, and the custodian's/principal's assessment of the causes. Some of the major findings are listed below:

a) Incidents of damage/loss were highest in June and costs were highest in June and August.
b) Glass breakage was the most frequently reported type of vandalism. More money was spent repairing glass breakage than any other type of damage.
c) A larger percentage of damage/loss incidents and a higher percentage of costs were due to wilful behaviour rather than to accidental damage or irresponsible behaviour causing damage.

RESEARCH METHODS

Research Design

A self-administered questionnaire was mailed to each school principal in Ontario by the Ministry of Education. The questionnaire was accompanied by a memo requesting that the school principal complete it and stating that no schools or boards would be identified in any published reports and that a report based on the survey results would be distributed later in the year to each school. In some cases someone other than the principal may have been delegated to complete the questionnaire. A copy of the literature review School Vandalism: Problems and Responses was enclosed with the questionnaire.

Questionnaire

The questionnaire contained six sections designed to obtain the following information:

1. School data, such as grades taught and number of students enrolled in 1978.
2. Information about a school alarm system.
3. A series of fifty-five questions about different vandalism prevention methods or activities. The first part of the question asked whether or not the school had implemented and/or continued to use a program during the past twelve months. The second part of the question measured the respondent's perception of how effective the program was in reducing school vandalism. The effectiveness of the program was measured using the following response categories: not at all; slightly; moderately; and very effective. A don't know category was also included.

   This series of two-part questions included questions related to the physical plant, procedures, school programs, and behavioural programs. The list of programs does not include all antivandalism techniques but is quite comprehensive. The respondent was asked to identify any other programs tried and to rate their effectiveness.

4. An estimate of vandalism costs for each school during 1978. The principal was asked to estimate separately the costs due to theft, arson, and irresponsible damage as well as the total cost to the school. Normal wear and maintenance expenses were not considered in the cost of vandalism.
5. Whether or not each school had a vandalism-reporting system.
6. A checklist to determine the extent to which community groups and persons have assisted in reducing school vandalism.

Two drafts of the questionnaire were completed before a pretest with approximately forty elementary and secondary school principals from one Ontario school board. As a result of the pretest, minor modifications were made to the format of the questionnaire and it became apparent that many school principals might not be able to provide the cost data. (See a copy of the questionnaire in Appendix 1 for further details.)

Data Collection

The questionnaire and literature review report were mailed by the Ministry of Education to each elementary and secondary school principal in Ontario on May 22, 1979. Questionnaires returned to the Ministry before August 13, 1979 were included in the survey. A total of 3025 useable questionnaires were received. This represents a response rate of 65.6% of all principals in Ontario.

Data Analysis

Each questionnaire was coded and checked and then keypunched onto tape. The responses have been analyzed by school level and number of students enrolled.

Sample Characteristics

This sample represents 66% of all schools in Ontario. Almost three-quarters (72.5%) of the responding schools are part of the public school system; just over one-quarter (26.4%) the separate school system; and 1.1% did not give an identity. As shown below, over half (55.9%) of the schools in the sample are located within the central region, as defined by the Ministry of Education.

Geographic Distribution

Region	# of schools	%
Northwestern	130	4.3
Midnorthern	159	5.3
Northeastern	146	4.8
Western	480	15.9
Central	1692	55.9
Eastern	386	12.8
No identity	32	1.1
Total	3025	100.0

The majority of the responding schools (78.6%) are primary and/or junior schools teaching junior Kindergarten to Grade 8. Intermediate schools teaching Grades 6 to 10 form 6.4% and senior or high schools comprise 15.0% of the sample. The percentages for school level are based on 3018 respondents since the grades taught at seven schools could not be discerned.

The responses were grouped into four categories on the basis of the number of students enrolled at each school. One-fifth of the schools (19.9%) has under 200 students, just over one-half (52.9%) between 200-249 students; one-fifth (19.4%) between 500-999 and 7.8% 1000 or more students.

Distribution of Responses of School Size

School Size by Enrollment	# of schools	%
0-199	602	19.9
200-499	1600	52.9
500-999	587	19.4
1000+	236	7.8
Total	3025	100.0

FINDINGS

Vandalism Prevention Measures Used

The principals were asked to indicate which of fifty-five vandalism prevention measures they used. For each measure used, they were asked to indicate how effective the measure was. The principals could indicate that the measure was not at all, slightly, moderately, or very effective. A don't-know response category was also included. The four categories were later assigned numerical values of 0, 1, 2, and respectively and these ratings were used to calculate average effectiveness ratings.

Overall Use Levels

The percentage of principals who reported using each of the measures[1] is shown in descending order of use in Table 1. Also shown are the average effectiveness of the measure, the standard deviation, and the number of respondents who use each measure.

Over 90% of the principals reported using the six following measures: providing adequate teacher supervision in hallways, lunch rooms, study areas, etc.(95.2%); keeping schools clean and attractive (95.0%); maintaining an up-to-date inventory of school equipment (92.9%); repairing visible damage as quickly as possible (92.2%); ensuring all windows and exterior doors are securely locked each evening (92.1%); and removing graffiti as soon as possible (91.4%).

A further eleven measures were used by half or more of the principals, fifteen were used by one-quarter to one-half of the principals, and the remaining twenty-three by less than one-quarter of the principals. The six measures least frequently used were: guard dogs (0.7%); designating a graffiti area (1.8%); police or security guard overnight stakeouts (2.7%); an incentive program or vandalism fund which allows students to spend money not required to pay vandalism costs (2.9%); payment by the student council for a percentage of the cost of damage caused by students (3.1%); and a special vandalism prevention program for students with emotional, behavioural, or learning problems (3.1%).

[1] For a complete list of measures and the exact wording used, see the questionnaire in Appendix 1.

Table 1/Percentage of Schools Using Preventive Measures and Average Effectiveness Scores

MEASURE	USE % Using	EFFECTIVENESS Average	Standard Deviation	No. of Respondents
Adequate teacher supervision in hallways, lunch rooms, etc.	95.2	2.66	.564	2533
Clean and attractive schools	95.0	2.28	.783	2315
Inventory of school equipment	92.9	1.82	1.055	1773
Repair visible damage quickly	92.2	2.34	.743	2213
Ensure all windows and exterior doors are locked each evening	92.1	2.54	.698	2193
Remove graffiti as soon as possible	91.4	2.31	.749	2222
Community use of schools	87.3	1.87	.974	1921
Students leave schools at completion of classes unless under supervision	79.4	2.59	.617	2044
Staff-key control system	79.1	2.22	.928	1740
Encourage positive relationships between staff and students	68.9	2.47	.643	1690
A no-cash policy	65.1	2.41	.787	1434
Keep laboratory, audio-visual equipment under lock and key	62.3	2.28	.817	1448
Parental restitution	61.7	2.19	.814	1595
Encourage staff to instill respect for private and public property	59.7	2.21	.712	1444
Lock classroom doors at night	57.6	2.30	.832	1339
Supervision of community groups	53.1	2.27	.795	1311
Leave interior lights on	51.6	1.94	.819	1177
Regular police patrolling of school	48.5	1.77	.801	1210
Increase exterior lighting	48.1	1.88	.831	1249

Table 1 (continued)

MEASURE	USE	EFFECTIVENESS		
	% Using	Average	Standard Deviation	No. of Respondents
Install break-resistant glazings	47.3	2.29	.759	1314
Remove stones and debris from school grounds	47.1	1.97	.813	1165
Vandal restitution program	46.2	2.22	.772	1171
Ask neighbours and parents to report suspicious activities to police	44.4	1.77	.893	1103
Mark school property	43.0	2.02	.860	782
Delineate school boundaries	42.3	1.21	1.021	938
Cover or protect thermostats, etc.	40.0	2.23	.813	962
Reduce access to the roof	38.7	1.92	.890	940
Prosecute vandals who are apprehended	36.0	2.13	.847	854
Install signs defining activities allowed on school property	32.0	1.41	.949	786
Install an alarm system	28.9	2.66	.647	724
Leave inside classroom and office doors open at night	28.1	2.24	.853	503
Install protective screens over windows	27.2	2.46	.747	756
Have signs directing visitors to main entrance	24.2	1.42	.910	604
Use of special playgrounds	23.0	2.03	.920	502
Use of vandalism prevention materials	23.0	1.91	.715	526
Community information programs	22.2	1.86	.778	532
Use of gates or chains across driveways	17.5	1.82	.951	480
Contests to increase students' pride in their school	16.3	2.07	.724	407
Use of graffiti-resistant materials	15.5	2.30	.694	396

Table 1 (continued)

MEASURE	USE % Using	EFFECTIVENESS Average	Standard Deviation	No. of Respondents
Reduce number or size of windows	12.7	2.42	.761	340
Install signs identifying school's boundaries	12.1	1.05	.895	305
Remove hardware from exterior doors	11.3	2.08	.842	271
Remove coins from machines	8.9	2.47	.772	213
Install damage-resistant washroom hardware	8.9	2.16	.710	227
Rewards to students or community members who inform on vandals	8.5	1.70	.956	168
Have all visitors sign in and out of the building	8.1	1.38	.950	207
Hire security guards	7.5	2.05	.897	176
Give student government or council more authority	6.7	2.07	.862	163
Put school custodians on twenty-four-hour shifts	5.2	2.43	.679	129
Vandalism prevention program for students with problems	3.1	2.24	.660	79
Student council pays cost of damage	3.1	2.04	.883	82
Establish incentive program or vandalism fund	2.9	1.88	.877	69
Police or security guard overnight stakeouts	2.7	2.10	.981	71
Designate area where graffiti is allowed	1.8	1.86	.947	36
Use of guard dogs	0.7	2.00	.816	12
Number of Respondents	3025			

The fifty-five measures may be categorized in a number of ways. To facilitate discussion they have been categorized by type of measure and by type of vandalism. The type of vandalism prevention measure is categorized as physical plant related measure, procedural or school program related measure, or behavioural measure.

As may be seen in Table 1, Appendix 11 none of the eleven physical plant related measures was used by over half of the principals. The most-used measures were: installing break-resistant glazings, such as safety glass, acrylics and polycarbonates (47.3%); clearly delineating school boundaries with fences, hedges, etc. (42.3%); and covering or protecting thermostats, light switches, etc. (40.0%).

Of the thirty procedural measures investigated, six were used by over 90% of the principals. These are the six most-used measures which are listed in Table 1. Only three of the behavioural measures are used by over half of the respondents. These are: a program to encourage positive relationships between staff and students (68.9%); parental restitution for damages caused by their children (61.7%); and a program to encourage staff to instill respect for private and public property (59.7%).

The substantial differences in the types of measures taken and the percentage of principals using them suggest that school personnel are most likely to react to school vandalism with procedures related to how the building and facilities are used rather than with physical changes in the building or with programs designed to modify student attitudes and behaviours. The relatively low emphasis on physical measures may be partly because principals and not plant superintendents answered the questionnaires. This finding contradicts the relatively strong emphasis on physical measures that is evident in the literature on school vandalism. The relatively low emphasis on behavioural measures suggests that principals are oriented more to modifying the school environment and procedures than human behaviour.

Table 2, Appendix II categorizes the measures by the type of vandalism. The vandalism typology used was developed by the authors when preparing a review of the literature on school vandalism prevention techniques (10). The system distinguishes between four main types of vandalism: vandalism as a general problem, intrusion, theft, and damage.

The most frequently used measures for reducing general vandalism were: providing adequate teacher supervision in hallways, lunch rooms, etc. (95.2%); keeping schools clean and attractive (95.0%); repairing visible damage quickly (92.2%); community use of schools for recreational and community purposes (87.3%); and students leaving the school building at the completion of classes unless they are under direct supervision for recreational or educational activities (79.4%).

The most frequently used measures to prevent or reduce intrusion were: ensuring all windows and exterior doors are securely locked each evening (92.1%); leaving interior lights on to discourage entry into the school (51.6%); regular patrolling of schools by police (48.5%); and increasing exterior lighting to discourage people loitering around the school at night (48.1%).

Measures frequently used to prevent theft were: maintaining an up-to-date inventory of school equipment (92.9%); maintaining a staff-key control system (79.1%); establishing a no-cash policy which insures money is not left in school overnight (65.1%); and keeping laboratory, audiovisual, musical, and electronic equipment in locked closets or rooms (62.3%).

Damage reduction measures used by the principals were: removing graffiti as soon as possible (91.4%); installing break-resistant glazings, such as safety glass, acrylics and ploycarbonates (47.3%); removing from the schoolgrounds stones and debris which could be used to break windows (47.1%); and covering or protecting thermostats and light switches, etc. (40.0%).

Use by School Level

A difference was found in most cases when the percentage of principals using each of the measures was analyzed by school level. For forty-seven out of fifty-five measures the difference was statistically significant, although no common pattern was evident. For six measures, considerably more primary than senior or high school principals reported their use. These were: having students leave the school building at the completion of classes unless they are under direct supervision for recreational or educational activities; encouraging staff to instill respect for private and public property; leaving inside classroom and office doors open at night to reduce damage in the event of a break-in; using special playgrounds, such as adventure, discovery, creative, etc.; using vandalism prevention materials, such as films, guest speakers, student conferences; and conducting contests that increase students' pride in their school (e.g.,posters, badges, etc.). In most cases, use by intermediate school principals was lower than the elementary and higher than the high school principals. See Table 3, Appendix 11.

Preventive measures used by more senior than primary school principals included: keeping laboratory, audiovisual, musical, and electronic equipment in locked closets or rooms; seeking parental restitution for damages caused by their children; prosecuting vandals who are apprehended; installing an alarm system; having signs at outside doors which direct visitors to the main entrance; using graffiti-resistant materials, such as epoxy-resin paints and plastic coverings in hallways, washrooms and areas where large numbers of students assemble; removing coins from vending machines at the end of each day; having all visitors sign in and out of the school building by means of a visitors' book at the main entrance; hiring a security guard on either a full-time or intermittent basis; giving the student government or council more authority; having school custodians in the school on a twenty-four-hour shift; having the student council pay a percentage of the cost of damage caused by students. In only a few cases did more intermediate than either primary or senior principals indicate using a preventive measure. Examples of such measures included:

establishing an incentive program or vandalism fund; encouraging positive relationships between staff and students; and reducing the number of size of windows.

Use by School Size

The use of the fifty-five measures was, with only one exception, related to school size. The sole exception was reducing access to the roof. In many cases, the use of a measure increased directly with the school size. An example is the prosecution of vandals who are apprehended which was reported by 21.9% of the principals with fewer than 200 students; 33.2% with 200-499 students; 44.3% with 500-999 students; and 70.8% with 1,000 or more students. Other measures which followed this pattern (see Table 4, Appendix 11) included: covering or protecting thermostats and light switches, etc.; installing an alarm system; locking classroom doors at night; parental restitution; a vandal restitution program; and keeping laboratory, audiovisual, musical, and electronic equipment in locked closets or rooms.

A substantial number of practices tended to increase in frequency of use as school size increased but the relationship was often less definite or a difference existed only between the very small schools and the large ones. The difference between the three larger-sized schools was usually relatively small.

For a few measures, fewer of the large than small schools reported using them. This often appears to be related to the fact that the very large schools are more likely to be high schools and the very small schools to be elementary schools. Examples of this type of relationship include: a no-cash policy which insures money is not left in school overnight; appealing to neighbours and parents to watch for and to report suspicious activities at the school; encouraging staff to instill respect for private and public property; leaving inside classroom and office doors open at night to reduce damage in the event of a break-in; and using special playgrounds, such as adventure, discovery, creative, etc.

Effectiveness of Prevention Measures Used

Each principal who indicated that the measure was used in their school was instructed to rate how effective the measure had been in reducing school vandalism. Five response categories were available for their use: not at all, slightly, moderately, very effective, and don't know. The distribution of principal's responses is shown in Table 5, Appendix II. In order to simplify the data analysis, numbers were assigned to the response categories and averages and standard deviations were calculated. The average effectiveness of each measure is shown in Table 2 in order of most to least effective.

Table 2/Average Effectiveness Score for Preventive Measures Used

MEASURE	EFFECTIVENESS Average	Standard Deviation	Number of Respondents
Install an alarm system	2.66	.647	724
Adequate teacher supervision in hallways, lunch rooms,etc.	2.66	.564	2533
Students leave school at completion of classes unless under supervision	2.59	.617	2044
Ensure all windows and exterior doors are locked each evening	2.54	.698	2193
Encourage positive relationships between staff and students	2.47	.643	1690
Remove coins from machines	2.47	.772	213
Install protective screens over windows	2.46	.747	756
Put school custodians on twenty-four-hour shifts	2.43	.679	129
Reduce number or size of windows	2.42	.761	340
A no-cash policy	2.41	.787	1434
Repair damage quickly	2.34	.743	2213
Remove graffiti as soon as possible	2.31	.749	2222
Lock classroom doors at night	2.30	.832	1339
Use of graffiti-resistant materials	2.30	.694	396
Install break-resistant glazings	2.29	.759	1314
Clean and attractive schools	2.28	.783	2315
Keep laboratory, audiovisual equipment under lock and key	2.28	.817	1448
Supervision of community groups	2.27	.795	1311
Leave inside classroom and office doors open at night	2.24	.853	503

Table 2 (continued)

MEASURE	EFFECTIVENESS Average	Standard Deviation	Number of Respondents
Vandalism prevention program for students with problems	2.24	.660	79
Cover or protect thermostats, etc.	2.23	.813	962
Vandal restitution program	2.22	.772	1171
Staff-key control system	2.22	.928	1740
Encourage staff to instill respect for private and public property	2.21	.712	1444
Parental restitution	2.19	.814	1595
Install damage-resistant washroom hardware	2.16	.710	227
Prosecute vandals who are apprehended	2.13	.847	854
Police or security guard overnight stakeouts	2.10	.981	71
Remove hardware from exterior doors	2.08	.842	271
Give student government or council more authority	2.07	.862	163
Contests to increase students' pride in their schools	2.07	.724	407
Hire security guards	2.05	.897	176
Student council pays cost of damage	2.04	.833	82
Use of special playgrounds	2.03	.920	502
Mark school property	2.02	.860	782
Use of guard dogs	2.00	.816	12
Remove stones and debris from school grounds	1.97	.813	1165
Leave interior lights on	1.94	.819	1177
Reduce access to roof	1.92	.890	940
Use of vandalism prevention materials	1.91	.715	526
Establish incentive program or vandalism fund	1.88	.877	69
Increase exterior lighting	1.88	.831	1249

Table 2 (continued)

MEASURE	EFFECTIVENESS Average	Standard Deviation	Number of Respondents
Community use of schools	1.87	.974	1921
Designate area where graffiti is allowed	1.86	.947	36
Community information programs	1.86	.778	532
Use of gates or chains across driveways	1.82	.951	480
Inventory of school equipment	1.82	1.055	1773
Ask neighbours and parents to report suspicious activities to police	1.77	.893	1103
Regular police patrolling of school	1.77	.801	1210
Rewards to students or community members who inform on vandals	1.70	.956	168
Install signs defining activities allowed on school property	1.41	.949	786
Have signs directing visitors to main entrance	1.42	.910	604
Have all visitors sign in and out of the building	1.38	.950	207
Delineate school boundaries	1.21	1.021	938
Install signs indentifying school's boundaries	1.05	.895	305

Overall Effectiveness Ratings

To facilitate discussion of the principal's effectiveness ratings of the measures, scores were assigned to the response categories as follows: not at all, 0; slightly, 1; moderately, 2; and very effective, 3. An average was calculated for each measure as shown in Table 2. Note that the average is based on the response of only those principals who said they had used the measure. Based on the average effectiveness scores, the measures were divided into three groups. The most effective third of the measures have scores of 2.25 or greater, the middle groups have scores of 2.00 to 2.24, and the least effective group have scores of less than 2.00. The two most effective vandalism prevention measures in the opinion of the principals, were the installation of an alarm system and the provision of adequate teacher supervision in hallways, lunch rooms, study areas, etc. Other very effective measures included: having students leave the school building at the completion of classes unless they are under direct supervision for recreational or educational activities; ensuring all windows and exterior doors are securely locked each evening; encouraging positive relationships between staff and students; and removing coins from vending machines at the end of each day.

The least effective measure used was the installation of signs which identify the school's boundaries. This measure has an effectiveness score of 1.05 compared to a score of 2.66 for installation of an alarm system and adequate teacher supervision. Other relatively ineffective measures included: clear delineation of school boundaries by means of fences, hedges, etc; having all visitors sign in and out of the building by means of a visitors' book at the main entrance; and installing signs which define acceptable and/or unacceptable activities on the school property.

The type of measures generally found to be most effective are physical plant related measures. As may be seen in Table 1, Appendix 11, five of the eleven physical plant related measures are rated as highly effective and only one as relatively ineffective. Of the fourteen behavioural measures studied only one has a highly effective rating and five have relatively ineffective ratings. Procedural measures tend to receive the same proportion of high and low effectiveness ratings.

While it is difficult to generalize about the effectiveness of the various school vandalism prevention measures, the following conclusions can be drawn from Table 2, Appendix 11. In reducing vandalism in general, teacher involvement and maintenance measures are perceived to be quite effective. Student related programs, prosecution of vandals, and restitution programs are moderately effective but community involvement measures are less effective than the others. The intrusion-prevention measures are rated as moderately to highly effective and barriers-to-access measures are generally rated as relatively ineffective except for ensuring that all windows and exterior doors are locked each evening which is rated quite highly. The theft prevention measures are rated highly as are the glass breakage prevention and graffiti related measures. Damage to interior hardware prevention measures only receive moderately effective ratings. The above conclusions are generalizations summarizing several measures at a time, but they indicate that the measures used to prevent some types of vandalism are perceived to be more successful than others.

Effectiveness by School Level

The effectiveness ratings were cross-tabulated by school level to determine whether principals at the primary, intermediate, and senior levels rated the measures differently. The distributions were tested for significant differences using the statistic chi square. For approximately half of the measures a difference in rating by the principals at the three levels was found. For ease of illustration, the mean effectiveness scores are shown in Table 3, Appendix 11 rather than in the response distributions.

No consistent pattern emerges from the effectiveness ratings of the principals at the three different school levels. The primary principals rated the following measures more effective than the senior school principals: providing adequate teacher supervision in hallways, lunch rooms, study areas, etc.; having students leave the school building at the completion of classes unless they are under direct supervision for recreational or educational activities; supervising community groups when they use the school;

establishing an incentive program or vandalism fund which allows students to spend money not required to pay vandalism costs; and designating an area where graffiti is allowed. Very few measures were rated more highly by the senior than the primary principals. Intermediate level school principals rated community use of schools; marking school property by means of ultraviolet pen or mechanical etching; and removing ladders, poles, etc. and keeping trees well away from the school to reduce access to the roof more effective than the other principals.

Effectiveness by School Size

For approximately half of the measures the effectiveness ratings made by the principals differed depending upon the size of the school. The relationship between school size and the effectiveness of these measures was negative, that is, as school size increased, the principals' perceived effectiveness of the measures decreased. Examples include the community use of schools which was rated by principals with 0-199, 200-499, 500 to 999, and more than 1000 students as 2.13, 1.91, 1.69 and 1.60 respectively. The measures for which a significant difference in perception occurred most frequently were also the ones most frequently used. Fourteen out of the sixteen most-used measures were rated differently in terms of their effectiveness by the principals in schools of different sizes. Only four of the twenty-two least-used measures were rated differently. The installation of an alarm system was one of a very few measures that was rated more effective by the principals from large rather than small schools.

Use and Effectiveness

In order to simplify the discussion of the school vandalism prevention measures, they have been grouped according to use and effectiveness rating. The measures were divided into four groups as shown in Table 3, namely, frequently used and effective; infrequently used and effective; frequently used but not effective; and infrequently used and not effective.

The five measures used by over 90% of the principals and rated as effective were: providing adequate teacher supervision in hallways, lunch rooms, study areas, etc; keeping schools clean and attractive to discourage damage by students; repairing visible damage as quickly as possible; ensuring all windows and exterior doors are securely locked each evening; and removing graffiti as soon as possible. Note that four of the five relate to maintenance or security of the physical plant.

Six measures used by fewer than 16% of the principals and rated quite effective by those who used them were: using graffiti-resistant materials, such as epoxy-resin paints and plastic coverings in hallways, washrooms, and areas where large numbers of students assemble; reducing the number or size of windows to decrease the possibility of breakage; removing coins from vending machines at the end of each day; installing damage-resistant washroom hardware; having school custodians in the school on a twenty-four-hour shift basis; and providing a special vandalism prevention program for students with emotional, behavioural, or learning problems. Three of these measures are plant related, two are procedural measures, and one a measure to change student behaviour.

Only two measures were frequently used and rated as ineffective. These were an inventory of school equipment and community use of schools. The community use of schools is probably done as part of the school's service to the community rather than as a vandalism prevention measure. An inventory of school equipment is done as a means of cost control and is likely a board policy rather than a conscious student vandalism prevention measure.

Five infrequently used ineffective vandalism prevention measures were identified. These measures were used by less than one-eighth of the principals and were rated relatively low in terms of effectiveness. The five measures were: installing signs which identify the school's boundaries; providing rewards to students or members of the community who inform on vandals; having all visitors sign in and out of the building by means of a visitors' book at the main entrance; establish-

ing an incentive program or vandalism fund which allows students to spend money not required to pay vandalism costs; and designating an area where graffiti is allowed. The inclusion in this category of measures which financially reward students for informing on vandals suggests these types of programs need further consideration. The few principals who have tried these programs rate them as relatively ineffective. Given the recent interest in PRIDE (8) and related student incentive programs, the low effectiveness ratings suggest these types of programs may not be as successful as their proponents anticipate.

Table 3/ Categorization of Preventive Measures

Frequently Used and Effective	% Using	Average Effectiveness
Adequate teacher supervision in hallways, lunch rooms, etc.	95.2	2.66
Clean and attractive schools	95.0	2.28
Repair visible damage quickly	92.2	2.34
Ensure all windows and exterior doors are locked each evening	92.1	2.54
Remove graffiti as soon as possible	91.4	2.31
Infrequently Used and Effective		
Use of graffiti-resistant materials	15.5	2.30
Reduce number or size of windows	12.7	2.42
Remove coins from machines	8.9	2.47
Install damage-resistant washroom hardware	8.9	2.16
Put school custodians on twenty-four-hour shifts	5.2	2.43
Vandalism prevention program for students with problems	3.1	2.24
Frequently Used and Ineffective		
Inventory of school equipment	92.9	1.82
Community use of schools	87.3	1.87
Infrequently Used and Ineffective		
Install signs identifying school's boundaries	12.1	1.05
Rewards to students or community members who inform on vandals	8.5	1.70

Infrequently Used and Ineffective (continued)	% Using	Average Effectiveness
Have all visitors sign in and out	8.1	1.38
Incentive program or vandalism fund	2.9	1.88
Designate area where graffiti is allowed	1.8	1.86
Number of Respondents	3025	

Other Prevention Measures

The principals were asked to write about student vandalism prevention measures they had tried at their school. While 16% of the principals listed one or more measures, they were often similar or identical to measures already included in the questionnaire. Over half of the principals who responded to this question mentioned programs related to the enhancement of student self-esteem and pride in the school. Examples of such measures and programs reported include:

1. Treating students with respect and trust to help create a human atmosphere and happy environment at school.
2. Stressing community and student ownership of school facilities, and teaching respect for property.
3. Making frequent public announcements around an "our school" theme, and holding assemblies to build school spirit.
4. Involving students in school maintenance and special beautification projects, that is, planting trees, decorating washrooms, painting the hallways, etc.
5. Involving students in vandalism prevention by letting them know the cost of repair; establishing student committees to control vandalism; letting the student draw up a code of ethics; and making students responsible for cleaning up damage.

Physical plant related measures were mentioned by 15% of the principals. About half of these responses related to keeping the interior or exterior of the school in complete or partial darkness at night.

Other measures mentioned include:

1. Greasing downspouts and antenna towers close to building; putting sticky pitch on the edge of the roof (this works until pitch hardens); and removing protruding bricks on the side of the building to prevent access to the school roof
2. Coating fire alarms with chemicals for detection of persons responsible
3. Using gentian violet powder on door closers
4. Removing washroom doors
5. Removing skylights
6. Reinforcing door frames with steel rods.

The next most frequently mentioned measures involved disciplinary and custodial measures. Some of the methods mentioned were: establishing a classroom sign-in-and-out system; having police visibly investigate an incident during school hours; monitoring the washrooms by the staff; issuing petty trespassing warnings; and enforcing corporal punishment.

Community and parent related activities or programs to reduce vandalism were mentioned by 11% of the principals who indicated a measure other than those listed in the questionnaire. Examples include: community use of school facilities and grounds; community and parent committees to deal with vandalism problems; making the school the focal point in the community and developing good public relations with community groups; and sending to parents and community members a newsletter that reports the type of vandalism occurring at the school and the cost of repairs, etc.

The remainder of the measures mentioned were quite varied. Several of them stressed the importance of property maintenance, schoolground beautification, and conscientious and friendly custodial staff. Other suggestions include: inviting former students back to school; displaying vandalism at open house; encouraging students to have lunch at home; emphasizing that job opportunities on graduation directly relate to the public's opinion of the school; polaroid photographing of trespassers while doing damage; and counselling students who have a poor self-image.

Alarm Systems

Alarm systems, ranging from the simple to the highly sophisticated, can be employed to prevent several forms of vandalism, such as malicious damage, break-and-enter, or arson. Ontario schools are equipped with a fire alarm system that sometimes is part of an intrusion system. Although there are many aspects to an intrusion alarm system such as type, placement, reliability, purpose, cost-effectiveness, etc., only the type of system and how it is monitored were investigated in this survey.

Almost two-fifths of the responding principals (37.9%) reported that their school was equipped with an alarm system and almost all of the schools (34.8%) that had systems were centrally monitored. The existance of an alarm system was found to be directly related to both school level and size. The percentages of primary, intermediate, and senior schools with an alarm system were: 34.3%, 48.7%, and 51.6% respectively. The same relationship was observed for the school-size categories: 0.199, 200-499, 500-599, and 1000+. The percentage of schools having an alarm system by these categories was: 22.8%, 35.6%, 51.5%, and 58.9% respectively.

There are numerous alarm systems, most of which may be integrated with various means of detection, such as heat sensors or equipment monitoring systems. Alarm devices fall into four major types: silent, audible or visible, space detection, and closed-circuit television. The questionnaire listed four types of detection alarm systems: audio, V.H.F. or ultrasonic, infrared, and mechanical detectors. Almost half of the schools that have an alarm system (47.8%) use some type of mechanical device. These may be magnetic contact switches, door buttons, taut wire, photoelectric beams, etc. As shown in Table 6, Appendix II, slightly more primary schools and those with a student enrollment under 200 use mechanical devices than the schools in the other level and size categories.

Audio systems, that is, those which connect an amplifier to a school's public address system were used by one-fifth of all schools (21.1%) who reported their school was equipped with an intrusion alarm system. More intermediate level schools than

primary or senior schools used this system. The percentages using an audio system for the primary, intermediate, and senior levels were: 21.7%, 28.0%, and 16.0% respectively.

Ultrasonic or very high frequency or infrared systems were also used by one-fifth of the alarm-equipped schools(22.1%). The ultrasonic systems send out a signal at frequency levels above human audibility and pick up any changes in frequency that may be caused by movement. The infrared devices detect heat waves from a human body within a range of twenty feet. The use of these types of detection systems increased as school level and number of students increased.

Vandalism-Reporting System

The principals were asked whether or not their school has a vandalism-reporting system which provides their board with information regarding the type of vandalism occurring, the cost of repair, etc. Overall, 82.2% said they have a reporting system, 11.7% say they do not, 3.8% don't know, and 2.3% did not reply.

The percentages of primary, intermediate, and senior school principals reporting a system were: 82.2%, 80.3%, and 83.0% respectively. Fewer small than large schools have vandalism-reporting systems. The percentages for the four sizes of schools were as follows: 0 -199 students 77.1%, 200-499 students 82.9%, 500-999 students 84.5%, and 1000 or more students 84.3%.

A few principals chose to provide more details as to the type of reporting system used at their school. The comments tended to be of two types.

1. Schools report the type of vandalism to their board, but the board determines the cost of repair.
2. The reporting system is limited in its definition of vandalism, that is, schools report to their board only broken windows, break-ins, serious damage, or any damage the principal deems necessary to report. The reporting form may have

a vague definition of vandalism that includes everything except theft or glass damage. Many items of vandalism, such as weather stripping torn out or tile pried off walls, may be repaired by maintenance staff and not listed as vandalism.

The Cost of School Vandalism

The principals were asked to estimate the cost of vandalism to their school during 1978 in terms of: theft; arson; damage within the school building; damage outside the school building including glass breakage,and damage to school property; other types of vandalism; and the total amount. They were instructed to include only theft, arson, and irresponsible damage in their estimate of the cost of vandalism. The cost of normal wear and maintenance were not to be included. The principals estimated the dollar cost of each type of vandalism. In many cases, only a total cost was cited because it is assumed they could not estimate the cost for each type of damage. Some principals stated the cost to the exact cent while others indicated their responses were only estimates.

Of the 322 respondents (10.7% of the sample) who did not give a total cost estimate, many wrote comments to the effect that this information is not available to them but could be obtained from their board. It appears that for many Ontario school systems, the cost of repairs are handled by the board. These records are kept centrally and the cost of repair is not communicated to the individual schools.

Total Cost

The cost of all vandalism reported by the 2703 principals who made an estimate was $4,676,804. The cost of the various components were as follows: theft $603,024; arson $1,703,397; damage within the school $718,747; damage outside the school $1,436,049; and other vandalism $61,145. Note the components do not add up to the total because several principals provided estimates of the total cost only.

Cost per School

The total cost of vandalism was calculated on a per school basis and reported in terms of dollar categories. As shown in Table 4, 45.5% of the principals estimated the total cost of vandalism at their school to be less than $500. This includes 5.5% who reported no vandalism.

Almost one-fifth of the principals (18.1%) reported from $500 to $999; one-eighth (12.7%) from $1000 to $1999; 9.2% from $2000 to $4999; and 3.8% $5000 and over. Although a no-vandalism category was not included in the question, 5.5% of the principals stated no costs were incurred as a result of vandalism at their school during 1978. The average total cost per school for the 2703 principals who made an estimate was $1730.23.

Table 4/Total Cost of Vandalism on a per School Basis

Amount	%
No vandalism	5.5
$1 - 199	16.9
$200 - 499	23.1
$500 - 999	18.1
$1000 - 1999	12.7
$2000 - 4999	9.2
$5000	3.8
No reply	10.7
Total	100.0
Number of Respondents	3025

The cost of vandalism on a per school basis is directly related to the grades taught. At the primary level, 6.7% reported no vandalism compared to 2.1% at the intermediate and 0.7% at the senior level. While 46.8% of the primary schools reported vandalism cost from $1 to $499, 28.4% of the intermediate and only 10.3% of the senior schools reported a similar amount. (See Table 7, Appendix 11).

The total cost of vandalism on a per school basis is directly related to school size. As the student population increases, the total cost of vandalism on a per school basis increases. The schools with 1000 or more students experienced substantially greater amounts of vandalism than schools with a smaller student population. Table 8, Appendix 11 shows the relationship between school size and total cost of vandalism. The percentage of different-sized schools reporting no vandalism were: less than 200 students 14.1%; 200-499 students 4.4%; 500-999 students 1.9%; and 1000 or more students 0.4%. The percentage of schools reporting $1000 or more vandalism for the four sizes of schools were: 8.9%; 19.1%; 43.1%; and 69.9% respectively.

Cost per Student

Probably the most useful way to compare vandalism costs is on a per student basis. The average cost per student for the 2703 schools providing estimates was $4.05. This ranged from $7.56 for schools with fewer than 200 students to $3.77 for 200-499 students; $4.14 for 500-999 students to $3.48 for students in schools with 1000 or more students. The very high cost per student in the smallest schools appears to be due to arson. Two fires in these schools cost $350,000 or $4.85 per student. Since many principals only provided a total estimate, it is impossible to determine the cost of the various types of vandalism and thus adjust for the very substantial differences in the cost of arson for schools of different sizes. The principals' responses demonstrate the need for a standard vandalism-reporting system.

Involvement of Community Groups or Persons

The principals were asked to indicate which community groups or persons they had involved in attempting to reduce vandalism at their school. As shown in Table 5, over three-quarters of the principals (76.1%) surveyed had involved the police and over half (57.6%) had contacted individual parents. The remaining community groups do not appear to have an active role in reducing vandalism at the schools. Other groups used were students,

neighbours, the school board, church groups, recreation associations, school psychologists, Brownies, Scouts, etc.

Table 5/Involvement of Community Groups or Persons

Group/Person Involved	% Using
Police	76.1
Individual parents	57.6
Parent associations	22.8
Children's Aid Society	16.1
Court	13.4
Social services (Municipal)	10.2
Social services (Provincial)	4.9
Prison staff	0.5
Other	4.4
Number of Respondents	3025

Schools with a student population of 1000 or more had a greater involvement with the police, the court system, and various social service agencies than schools with fewer students. Parent associations were slightly more likely to be involved in reducing vandalism in schools with 200 to 999 students. (See Table 9, Appendix II.)

Parent associations were also more involved at primary level schools (25.7%) than schools at the intermediate or senior levels (10.9% and 12.8% respectively). Individual parents appear to be equally involved in vandalism prevention at all three school levels and the police are just slightly more involved at the intermediate and senior than primary levels. However, one-third of the senior schools reported using the court system compared to about one-tenth of the primary schools and about one-fifth of the intermediate schools. (See Table 10, Appendix II.)

DISCUSSION

Vandalism Prevention

The responses of the principals indicate that a wide range of vandalism prevention measures are being used in Ontario schools. The prevalence of the measures ranges from 95% to less than 1%. Many of the most-used prevention measures are commonsense procedures which are part of the usual school routine such as providing adequate teacher supervision in hallways, lunch rooms, study areas, etc. and keeping schools clean and attractive to discourage damage by students. The least frequently used measures tend to be either specific student related programs to reduce vandalism or extreme security measures. Examples of the first type include establishing an incentive program or vandalism fund and having the student council pay the cost of damage. Examples of security measures include the use of guard dogs as part of a patrol or in-school program and police or security guard overnight stake-outs.

There is a tendency for procedural or housekeeping measures to be used more frequently than physical plant or behavioural measures or programs. Measures and programs involving modification of the physical plant are reported by fewer than half the principals. The most-used physical plant measure is the installation of break-resistant glazings which is reported by just under half the principals. They rated this measure relatively high in terms of effectiveness. The minority of principals who reported trying the other ten physical plant related measures tended to rate them as highly effective. The single most effective measure, the installation of an alarm system, was reported by just over one-quarter of the principals. Note that in a separate question, almost two-fifths of the principals indicated they had an alarm system of some type. Apparently some principals interpreted the former question to relate only to alarms installed during the past year. Regardless of which percentage is most accurate, the prevalence of school alarm systems is relatively low.

Given the relatively low level of physical plant related measures, there is a need to provide the people responsible for the physical plant with more information on measures of this type. Specific examples of measures judged very effective include: reducing the number and size of windows; using graffiti-resistant materials; installing protective screens over windows; and installing an alarm system.

Behavioural measures or programs are generally not widely used and are given low or medium effectiveness ratings. The only behavioural measure rated very effective is encouraging positive relationships between staff and students. Eight of the measures have been tried by less than one-quarter of the principals. Half of these measures were rated low and half medium in terms of effectiveness. Generally, behavioural programs receive low effectiveness ratings but the level of use and effectiveness ratings often differ depending upon the level of schools considered. For example, the use of vandalism prevention materials such as films, guest speakers, student conferences is reported by only one-tenth of the high school principals. They rated this measure as being relatively ineffective. More than one-quarter of intermediate school principals who used materials rated them as very effective. By contrast, contests to increase student pride in their school are used by more intermediate than high school principals but are rated as more effective by high school than by intermediate school principals.

The data suggests that behavioural prevention programs in general and incentive programs in particular tend to be underutilized. There does not appear to be consensus among principals as to the effectiveness of these measures, but, in general, they are rated as only medium or low on the effectiveness scale. Part of the difference in rating likely arises from the variation in the type of programs involved and the manner in which they have been implemented. The various behavioural measures and programs warrant further investigation in terms of what programs are actually being used and how effective they are in terms of meeting their objectives.

The Cost of Vandalism

The cost estimates provided by the respondents should be treated with considerable caution. The total cost of school vandalism reported was $4,676,804. This figure represents the total cost for only 2703 schools whose principals provided an estimate. The cost of vandalism in the schools of the principals who did not participate in the survey is unknown. The average cost of $4.05 per student is a good estimate for the schools in the survey but may or may not be an accurate estimate of the cost on a provincial basis.

Vandalism costs can be easily distorted by a few cases of arson. As was shown for the schools with fewer than 200 students, two fires changed the per student cost radically. It is for this reason that any study of vandalism costs should separate out arson from other types of theft and damage. Vandalism costs will not be accurately known until such time as a standarized reporting system with common definitions is established in all schools.

Using the Findings

The research findings reported in this study represent a first attempt to document the types of vandalism prevention measures being used by Ontario school principals. In terms of utilizing this information, it is suggested that a principal or plant superintendent will find it useful to first determine the types of measures which have been used by other educators to solve similar problems. A review of vandalism problems may be found in School Vandalism: Problems and Responses (11) which was sent to each Ontario principal. The vandalism prevention measures investigated in this survey have been categorized by type of vandalism in Table 2, Appendix 11 of this report. This table indicates which measures have been investigated.

Once the range of possible prevention measures has been identified, one can determine their effectiveness from the tables in this report. The effectiveness of each of the fifty-five measures studied may be found by school level (primary, intermediate, and senior) in Table 3, Appendix II and by school size (less 200 students, 200-499, 500-99, 1000 or more) in Table 4, Appendix II.

A measure with a score of 2.25 or greater is considered very effective and one with a score of less than 2.00 is relatively ineffective. In deciding whether or not a measure is appropriate for their school, one should note what percentage of schools of a similar level or size have used it. The larger the number of users the more accurate the effectiveness measure is likely to be.

When developing a school vandalism prevention program, it should be realized that it is easier to make changes in the physical plant or to modify procedures than to introduce behavioural changes. Consequently, there appears to be a tendency for schools to utilize these types of measures more than behavioural programs. Behavioural measures and programs which instill a strong sense of self-worth and respect for public and private property based on positive values and attitudes can in the longer term do more to reduce school vandalism and other antisocial behaviour than architectural or organizational procedures. School vandalism needs to be approached from all three perspectives, using both short and long-term measures.

SUMMARY

Background

This study, An Investigation into Vandalism Prevention Programs Used in Ontario Schools, is a follow-up to a literature review of vandalism prevention programs prepared by Info-Results Limited for the Ministry of Education in 1978. The purpose of the study was to determine: the types of vandalism prevention measures being used in Ontario schools; how effective the principals believe the measures have been in reducing school vandalism; the cost of vandalism; and the extent to which community groups are involved in preventing vandalism.

A self-administered questionnaire was mailed to each school principal in Ontario. The questionnaire was accompanied by an explanatory memo and a copy of the literature review School Vandalism: Problems and Responses. The questionnaire requested the following information:

1. Demographic characteristics of the school.
2. Information about a school alarm system.
3. A series of fifty-five questions about different prevention measures or activities. The question inquired as to whether or not the school had used the program during the past twelve months as well as the respondent's perception of how effective the program had been in reducing school vandalism.
4. An estimate of the cost of vandalism during 1978.
5. Whether or not the school had a vandalism-reporting system.
6. A checklist to determine which community groups have assisted in reducing school vandalism.

A total of 3,025 useable questionnaires were received. This represents a response rate of 65.6% of all principals in Ontario.

Findings

Vandalism Prevention Measures

The percentage of the 3,025 principals who reported using each of the measures is shown in Table 1 along with the average effectiveness of the measure. For discussion purposes, the preventive measures were categorized as physical plant related, such as installing an alarm system; procedural or school program related, such as repairing visible damage quickly; and behavioural measures, such as a vandal restitution program.

Over 90% of the principals reported using the six following measures: providing adequate teacher supervision; keeping schools clean and attractive; maintaining an up-to-date inventory of school equipment; repairing visible damage quickly; ensuring all windows and exterior doors are securely locked each evening; and removing graffiti as soon as possible.

A further eleven measures were used by half or more of the principals, fifteen were used by one-quarter to one-half of the principals, and the remaining twenty-three by less than one-quarter of the principals. The six measures least frequently used were: guard dogs; an area where graffiti is allowed; police or security guard overnight stakeouts; an incentive program or vandalism fund payment by the student council of a percentage of the cost of damage; and a special vandalism prevention program for students with problems.

The measures were discussed in terms of the three categories: physical plant related measures; procedural or school program related measures; and behavioural measures. None of the eleven physical plant related measures was used by over half of the principals. The most frequently used physical plant measure was installing break-resistant glazings reported by 47% of the principals.

Of the thirty procedural measures investigated, six(listed above) were used by over 90% of the principals. Only three of the behavioural measures were used by over half of the respondents. These were: encouraging positive relationships between staff and students; seeking parental restitution for damages caused by their children; and encouraging staff to instill respect for private and public property.

The percentage of principals using each of the measures was analyzed by school level defined as primary (Kindergarten to Grade 8); intermediate (Grades 6 to 10); and senior or high schools. A difference by school level was found in forty-seven out of fifty-five measures but no common pattern was evident.

Table 1/Percentage of Schools Using Preventive Measures and Average Effectiveness Scores by Type of Preventive Measure

TYPE OF PREVENTIVE MEASURE	% Using	Average Effectiveness
PHYSICAL PLANT MEASURES		
Installing break-resistant glazings, such as safety glass, acrylics, and polycarbonates	47.3	2.29
Clear delineation of school boundaries by means of fences, hedges, etc.	42.3	1.21
Covering or protecting thermostats, light switches, etc.	40.0	2.23
Installing an alarm system	28.9	2.66
Installing protective screens over windows	27.2	2.46
Use of special playgrounds, such as adventure, discovery, creative, etc.	23.0	2.03
Use of gates or chains across driveways to discourage access to school grounds	17.5	1.82
Using graffiti-resistant materials, such as epoxy-resin paints and plastic coverings in hallways, washrooms and areas where large numbers of students assemble	15.5	2.30
Reducing the number or size of windows to decrease possibility of breakage	12.7	2.42
Removing hardware from exterior doors to reduce damage and possible entry	11.3	2.08
Installation of damage-resistant washroom hardware	8.9	2.16
PROCEDURAL MEASURES		
Provide adequate teacher supervision in hallways, lunch rooms, study areas, etc.	95.2	2.66
Keeping schools clean and attractive to discourage damage by students	95.0	2.66
Maintaining an up-to-date inventory of school equipment	92.9	1.82
Repairing visible damage as quickly as possible to discourage further damage	92.2	2.34
Program to ensure all windows and exterior doors are securely locked each evening	92.1	2.54
Removing graffiti as soon as possible	91.4	2.31

Table 1 (continued)

TYPE OF PREVENTIVE MEASURE	% Using	Average Effectiveness
Community use of schools for recreational and community purposes	87.3	1.87
Maintaining staff-key control system	79.1	2.22
Have students leave the school building at the completion of classes unless they are under direct supervision for recreational or educational activities	79.4	2.59
Establishing a no-cash policy which insures money is not left in school overnight	65.1	2.41
Keeping laboratory, audiovisual, musical, and electronic equipment in locked closets or rooms	62.3	2.28
Locking classroom doors at night	57.6	2.30
Supervision of community groups when they use the school	53.1	2.27
Leaving interior lights on to discourage entry into the school	51.6	1.94
Police surveillance in terms of regular patrolling of school	48.5	1.77
Increasing exterior lighting to discourage people loitering around the school at night	48.1	1.88
Removing stones and debris from the schoolgrounds which could be used to break windows	47.1	1.97
Marking school property by means of ultraviolet pen or mechanical etching	43.0	2.02
Removing ladders, poles, etc. and keeping trees well away from school to reduce access to the roof	38.7	1.92
Installing signs which define acceptable and/or unacceptable activities on the school property	32.0	1.41
Leaving inside classroom and office doors open at night to reduce damage in the event of a break-in	28.1	2.24
Having signs at outside doors which direct visitors to the main entrance	24.2	1.42
Installing signs which identify the school's boundaries	12.1	1.05
Removing coins from vending machines at the end of each day	8.9	2.47

Table 1 (Continued)

TYPE OF PREVENTIVE MEASURE	% Using	Average Effectiveness
Having all visitors sign in and out of the building by means of a visitor's book at the main entrance	8.1	1.38
Hiring a security guard on either a full-time or intermittent basis	7.5	2.05
Having school custodians in the school on a twenty-four-hour shift basis	5.2	2.43
Police or security guard overnight stakeouts	2.7	2.10
Designation of an area where graffiti is allowed, such as a particular chalkboard	1.8	1.86
Use of guard dogs as part of a patrol or in-school program	0.7	2.00
BEHAVIOURAL MEASURES		
Program to encourage positive relationships between staff and students	68.9	2.47
Seek parental restitution for damages caused by their children	61.7	2.19
A program to encourage staff to instill respect for private and public property	59.7	2.21
Recover cost of damage from vandals who are apprehended by means of a restitution program	46.2	2.22
Appeal to neighbours and parents to watch for and report to police suspicious activities which occur at the school	44.4	1.77
Prosecution of vandals who are apprehended	36.0	2.13
Use of vandalism prevention materials, such as films, guest speakers, student conferences	23.0	1.91
Involve the community in vandalism prevention by means of information programs	22.2	1.86
Conduct contests which increase students' pride in their school in an effort to reduce vandalism costs, e.g.,posters, badges, etc.	16.3	2.07
Provide rewards to students or members of the community who inform on vandals	8.5	1.70

Table 1 (continued)

TYPE OF PREVENTIVE MEASURE	% Using	Average Effectiveness
Giving the student government or council more authority	6.7	2.07
A special vandalism prevention program for students with emotional, behavioural, or learning problems	3.1	2.24
Have the student council pay a percentage of the cost of damage caused by students	3.1	2.04
Establish an incentive program or vandalism fund which allows students to spend money not required to pay vandalism costs	2.9	1.88

The use of the fifty-five measures was, with only one exception, significantly related to school size. The responses were grouped into the following four categories on the basis of the number of students enrolled at each school: 0-199; 200-499; 500-999; and 1000 or more students. The sole exception was reducing access to the roof by keeping ladders, poles, and trees away from the school building. In many cases the use of a measure increased directly as school size increased. In several cases there was a difference between the very small schools and the large ones, but little difference among the three larger school groupings. For a few measures, fewer of the larger than small schools reported using them. This often appears to be related to the fact that the very large schools are more likely to be high schools and the very small schools to be elementary schools.

Effectiveness of Measures

Each principal, who indicated that a measure was used in their school, was instructed to rate how effective the measure had been in reducing school vandalism using five response categories. In order to simplify the data analysis, numbers were assigned to the response categories as follows: not at all, 0; slightly, 1; moderately, 2; and very effective, 3. The don't know responses were not included in this analysis. An average score was calculated for each measure. The score was based on the responses of only those principals who said they used the measure. Based on the average effectiveness score, the measures were divided into three groups. The most effective third of the measures have

scores of 2.25 or greater, the middle groups have scores of 2.00 to 2.24, and the least effective group have scores of less than 2.00.

The two most effective vandalism prevention measures used, in the opinion of the principals, were the installation of an alarm system and providing adequate teacher supervision. Other very effective measures include: having students leave the school building at the completion of classes unless under direct superivision; ensuring windows and exterior doors are securely locked each evening; encouraging positive relationships between staff and students; and removing coins from vending machines at the end of each day.

The measures found to be most effective were physical plant related measures. Five of the eleven physical plant related measures were rated as highly effective. Of the fourteen behavioural measures studied, only one has a highly effective rating and five have relatively ineffective ratings. Procedural or program related measures tend to receive the same proportion of high and low effectiveness ratings.

For approximately half of the measures, the effectiveness ratings made by the principals differed depending upon the size of the school. As school size increased, the perceived effectiveness of the measure usually decreased. The installation of an alarm system was one of very few measures that was rated more effective by the principals from large rather than small schools.

Use and Effectiveness

In order to simplify the discussion of the school vandalism prevention measures, they were grouped in terms of both use and effectiveness rating. The measures were divided into four groups, namely, frequently used and effective; infrequently used and effective; frequently used but not effective; and infrequently used and not effective. See Table 2 for the measures, the percentage using each, and their effectiveness rating.

Table 2/Categorization of Preventive Measures into Use and Effectiveness

Categorization	% Using	Average Effectiveness
Frequently Used and Effective		
Adequate teacher supervision	95.2	2.66
Clean and attractive schools	95.0	2.28
Repair visible damage quickly	92.2	2.34
Ensure windows and doors locked each evening	92.1	2.54
Remove graffiti as soon as possible	91.4	2.31
Infrequently Used and Effective		
Use of graffiti-resistant materials	15.5	2.30
Reduce number or size of windows	12.7	2.42
Remove coins from machines	8.9	2.47
Install damage-resistant washroom hardware	8.9	2.16
Put school custodians on twenty-four-hour shifts	5.2	2.43
Prevention programs for students with problems	3.1	2.24
Frequently Used and Ineffective		
Inventory of school equipment	92.9	1.82
Community use of schools	87.3	1.87
Infrequently Used and Ineffective		
Install signs identifying school's boundaries	12.1	1.05
Rewards to student or community members who inform on vandals	8.5	1.70
Have all visitors sign in and out	8.1	1.38
Incentive program or vandalism fund	2.9	1.88
Designated area where graffiti is allowed	1.8	1.86

Alarm Systems

Almost two-fifths of the responding principals reported that the school was equipped with an alarm system and almost all of the schools had systems which were centrally monitored. The percentage of schools with alarm systems increased from primary to intermediate and again to senior schools. The percentage of principals reporting an alarm system increased as school size increased.

Vandalism-Reporting System

The principals were asked whether or not their school has a vandalism-reporting system which provides their board with information regarding the type of vandalism occurring, the cost of repair, etc. Overall, 82% said they have a reporting system, 12% say they do not, 4% don't know, and 2% did not reply.

The Cost of School Vandalism

The principals were asked to estimate the cost of vandalism to their school during 1978 and provide, if possible, a breakdown by theft, arson, damage within the school building, damage outside the school building including glass breakage and damage to school property, other types of vandalism, and the total amount. While 89% of the principals provided estimates, many were unable to estimate the cost of each type of vandalism. Some indicated the cost of one or two types but did not make an estimate of the total cost. A number of principals indicated their estimates were only guesses. The information on vandalism costs should be treated with considerable caution.

The cost of all vandalism reported by the 2703 principals who made an estimate was $4,676,804. Almost one-fifth of the principals (18%) reported vandalism at their school cost from $500 to $999, 13% from $1000 to $1999, 9% from $2000 to $4999, and 4% $5000 and over. Although a no-vandalism category was not included in the question, 5.5% of the principals stated no costs were incurred as a result of vandalism at their school during 1978. The average total cost per school for the 2703 principals who made an estimate was $1730.

The average cost per student for the 2703 schools providing estimates was $4.05. This ranged from $7.56 for schools with fewer than 200 students to $3.77 for 200-499 students; $4.14 for 500-999 students to $3.48 for students in schools with 1000 or more students. The very high cost per student in the smallest schools appears to be due to arson. Two fires in these schools cost $350,000 or $4.86 per student.

Community Groups

The principals were asked to indicate which community groups or persons they had involved in attempting to reduce vandalism at their school. Over three-quarters of the principals surveyed had involved the police and over half had contacted individual parents. The remaining community groups do not appear to have an active role in reducing vandalism at the schools. These groups were parent associations, Children's Aid Society, municipal and provincial social services, and prison staff.

Discussion

The research findings are discussed in terms of vandalism prevention, the cost of vandalism, and how to use the findings.

Vandalism Prevention

There is a tendency for procedural or school program related vandalism prevention measures to be used more frequently than physical plant measures or behavioural programs. There appears to be a need to make plant staff more aware of the prevention measures available to them. The most-used physical plant measure is the use of break-resistant glazings while the most effective measure is the installation of an alarm system.

The findings suggest behavioural programs are seldom used and are relatively less effective than other types of prevention measures. There is substantial variation in both use and effectiveness in schools of different sizes and at the primary, intermediate, and senior levels. Work is needed to better understand what types of programs are most effective in reducing vandalism at each level.

The Cost of Vandalism

The total cost of all vandalism in 1978 reported by the 2703 principals who made estimates was $4,676,804. The average cost per school was $1730 or $4.05 per student. These figures should be treated with caution because not all schools provided estimates and a small number of fires can distort the average. The need for a standard vandalism-reporting system was also discussed.

Using the Findings

A procedure for using the findings from this study was outlined earlier. It was suggested that the literature review School Vandalism: Problems and Responses by White and Fallis be used to identify the potential measures that can be used to prevent or reduce vandalism. The measures are summarized in a format similar to that used in the literature review in order to facilitate their use. The user is encouraged to consider the level and size of school in selecting the most effective school vandalism prevention measure.

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APPENDIX 1

QUESTIONNAIRE

1 - 4

Study of Vandalism Prevention Measures 5

1. Please provide the following information about your school.

   1. Name of Board: _____ _____ 6 - 8

   2. Name of School: _____ _____ 9 - 12

   3. Grades taught at your school: (Put checkmark in box)

Primary and Junior	☐1	13
Intermediate	☐2	
Senior	☐3	
Other: specify below		
_____	_____	

4. Number of students enrolled in September 1978: (put in actual number) _____ 14 - 17

11. Alarm Systems

   1. If your school has an alarm system, is it:

Do not have alarm system	☐1	18
Centrally monitored	☐2	
Not centrally monitored	☐3	
Don't know	☐4	

   2. If your school has an alarm system, what type is it?

Audio, e.g. P.A.system	☐1	19
V.H.F. or ultrasonic	☐2	
Infrared	☐3	
Mechanical, e.g. contact switches, light beam, etc	☐4	
Don't know type	☐5	
Other: Specify below		
_____	_____	

111. Listed below are a number of antivandalism measures which have been tried in schools. Please put a checkmark in the appropriate box to indicate:

a) whether or not your school has implemented or continued to use the measure during the past twelve months, and

b) the extent to which you believe the measure has proven effective in reducing vandalism in your school.

PREVENTIVE MEASURES	HAVE USED IN 1978-1979				EFFECTIVENESS					
	Yes 1	No 2	Don't know 3	Not applicable 4	Not at all 1	Slightly 2	Moderately 3	Very 4	Don't know 5	
1. Installing protective screens over windows										20 21
2. Installing break-resistant glazings, such as safety glass, acrylics and polycarbonates										22 23
3. Reducing the number or size of windows to decrease possibility of breakage										24 25
4. Removing stones and debris from the schoolgrounds which could be used to break windows										26 27
5. Installing an alarm system										28 29
6. Hiring a security guard on either a full-time or intermittent basis										30 31
7. Having school custodians in the school on a twenty-four-hour shift basis										32 33
8. Police surveillance in terms of regular patrolling of school										34 35
9. Police or security guard overnight stakeouts										36 37
10. Use of guard dogs as part of a patrol or in-school program										38 39

PREVENTIVE MEASURES	HAVE USED IN 1978-1979				EFFECTIVENESS					
	Yes 1	No 2	Don't know 3	Not applicable 4	Not at all 1	Slightly 2	Moderately 3	Very 4	Don't know 5	
11. Clear delineation of school boundaries by means of fences, hedges, etc.										40 41
12. Use of gates or chains across driveways to discourage access to school grounds										42 43
13. Installing signs which identify the school's boundaries										44 45
14. Having signs at outside doors which direct visitors to the main entrance										46 47
15. Having all visitors sign in and out of the building by means of a visitor's book at main entrance										48 49
16. Increasing exterior lighting to discourage people loitering around the school at night										50 51
17. Leaving interior lights on to discourage entry into the school										52 53
18. Removing ladders, poles, etc. and keeping trees well away from school to reduce access to the roof										54 55
19. Removing hardware from exterior doors to reduce damage and possible entry										56 57
20. Establishing a no-cash policy which insures money is not left in school overnight										58 59
21. Removing coins from vending machines at the end of each day										60 61
22. Marking school property by means of ultraviolet pen or mechanical etching										62 63

PREVENTIVE MEASURES	HAVE USED IN 1978-1979				EFFECTIVENESS					
	Yes 1	No 2	Don't know 3	Not applicable 4	Not at all 1	Slightly 2	Moderately 3	Very 4	Don't know 5	
23. Maintaining an up-to-date inventory of school equipment										64 65
24. Keeping laboratory, audio-visual, musical and electronic equipment in locked closets or rooms										66 67
25. Maintaining a staff-key control system										68 69
26. Locking classroom doors at night										70 71
27. Program to ensure all windows and exterior doors are securely locked each evening										72 73
28. Installing signs which define acceptable and/or unacceptable activities on the school property										74 75
29. Keeping schools clean and attractive to discourage damage by students										6 7
30. Repairing visible damage as quickly as possible to discourage further damage										8 9
31. Removing graffiti as soon as possible										10 11
32. Using graffiti-resistant materials, such as epoxy-resin paints and plastic coverings in hallways, washrooms and areas where large numbers of students assemble										12 13
33. Designation of an area where graffiti is allowed, such as a particular chalkboard										14 15
34. Installation of damage-resistant washroom hardware										16 17

PREVENTIVE MEASURES	HAVE USED IN 1978-1979				EFFECTIVENESS					
	Yes 1	No 2	Don't know 3	Not applicable 4	Not at all 1	Slightly 2	Moderately 3	Very 4	Don't know 5	
35. Covering or protecting thermostats, light switches, etc.										18 19
36. Involve the community in vandalism prevention by means of information programs										20 21
37. Community use of schools for recreational and community purposes										22 23
38. Supervision of community groups when they use the school										24 25
39. Appeal to neighbours and parents to watch for and report to police suspicious activities which occur at the school										26 27
40. Prosecution of vandals who are apprehended										28 29
41. Recover cost of damage from vandals who are apprehended by means of a restitution program										30 31
42. Seek parental restitution for damage caused by their children										32 33
43. Provide rewards to students or members of the community who inform on vandals										34 35
44. Provide adequate teacher supervision in hallways, lunch rooms, study areas, etc.										36 37
45. Have students leave the school building at the completion of classes unless they are under direct supervision for recreational or educational activities										38 39

PREVENTIVE MEASURES	HAVE USED IN 1978-1979				EFFECTIVENESS					
	Yes 1	No 2	Don't know 3	Not applicable 4	Not at all 1	Slightly 2	Moderately 3	Very 4	Dont' know 5	
46. Have the student council pay a percentage of the cost of damage caused by students										40 41
47. Establish an incentive program or vandalism fund which allows students to spend money not required to pay vandalism costs										42 43
48. Leaving inside classroom and office doors open at night to reduce damage in the event of a break-in										44 45
49. Conduct contests which increase students' pride in their school in an effort to reduce vandalism costs, e.g., posters, badges, etc.										46 47
50. Use of vandalism prevention materials, such as films, guest speakers, student conferences										48 49
51. A program to encourage staff to instill respect for private and public property										50 51
52. Program to encourage positive relationships between staff and students										52 53
53. A special vandalism prevention program for students with emotional, behavioural, or learning problems										54 55
54. Giving the student government or council more authority										56 57
55. Use of special playgrounds, such as adventure, discovery, creative, etc.										58 59
56. Please explain other measures <u>you</u> have tried at your school										60 61
57. Other measures:										62 63

IV. Please estimate the cost of vandalism to your school during the calendar year of 1978. Use any school records available to make this estimate.

Vandalism includes: theft
arson
irresponsible damage

Do not include the cost of normal wear and maintenance.

Theft	$_____	6 - 12
Arson	$_____	13 - 19
Damage within the school building	$_____	20 - 26
Damage outside the school building, including glass breakage and damage to school property	$_____	27 - 33
Other specify below	$_____	34 - 40
TOTAL	$_____	41 - 47

OTHER:

_____

_____

_____ _____ 48

V. Does your school have a vandalism-reporting system which provides your board with information regarding the type of vandalism occurring, the cost of repair, etc.?

Yes, have reporting system ☐ 1 49
No reporting system ☐ 2
Don't know ☐ 3

VI. Have you involved the following community groups or persons in attempting to reduce vandalism at your school? Please put a checkmark in yes or no, or don't know.

		Yes (1)	No (2)	Don't know (3)
a)	Police	☐	☐	☐
b)	Court	☐	☐	☐
c)	Prison staff	☐	☐	☐
d)	Social services (Provincial)	☐	☐	☐
e)	Social services (Municipal)	☐	☐	☐
f)	Childrens' Aid Society	☐	☐	☐
g)	Individual parents	☐	☐	☐
h)	Parent Associations	☐	☐	☐
i)	Other please specify below	☐	☐	☐

_____ _____

_____ _____

VIII. Do you have any comments about school vandalism or vandalism prevention measures?

_____

_____

_____

_____

_____

_____

_____

_____

Thank you for your assistance.

60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77

APPENDIX II

ADDITIONAL TABLES

Table 1/Percentage of Schools Using Preventive Measures and Average Effectiveness Scores by Type of Preventive Measure

TYPE OF PREVENTIVE MEASURE	% Using	Average Effectiveness
PHYSICAL PLANT MEASURES		
Install break-resistant glazings	47.3	2.29
Delineate school boundaries	42.3	1.21
Cover or protect thermostats, etc.	40.0	2.23
Install an alarm system	28.9	2.66
Install protective screens over windows	27.2	2.46
Use of special playgrounds	23.0	2.03
Use of gates or chains across driveways	17.5	1.82
Use of graffiti-resistant materials	15.5	2.30
Reduce number or size of windows	12.7	2.42
Remove hardware from exterior doors	11.3	2.08
Install damage-resistant washroom hardware	8.9	2.16
PROCEDURAL MEASURES		
Adequate teacher supervision in hallways, etc.	95.2	2.66
Clean and attractive schools	95.0	2.28
Inventory of school equipment	92.9	1.82
Repair visible damage quickly	92.2	2.34
Ensure all windows and exterior doors are locked each evening	92.1	2.54
Remove graffiti as soon as possible	91.4	2.31
Community use of schools	87.3	1.87
Staff-key control system	79.1	2.22
Students leave school at completion of classes unless under supervision	79.4	2.59
A no-cash policy	65.1	2.41
Keep laboratory, audiovisual equipment under lock and key	62.3	2.28
Lock classroom doors at night	57.6	2.30
Supervision of community groups	53.1	2.27
Leave interior lights on	51.6	1.94
Regular police patrolling of school	48.5	1.77
Increase exterior lighting	48.1	1.88
Remove stones and debris from school grounds	47.1	1.97

Table 1 (continued)

TYPE OF PREVENTIVE MEASURES	% Using	Average Effectiveness
Mark school property	43.0	2.02
Reduce access to roof	38.7	1.92
Install signs defining activities allowed on school property	32.0	1.41
Leave inside classroom and office doors open at night	28.1	2.24
Have signs directing visitors to main entrance	24.2	1.42
Install signs identifying school's boundaries	12.1	1.05
Remove coins from vending machines	8.9	2.47
Have all visitors sign in and out of building	8.1	1.38
Hire a security guard	7.5	2.05
Put school custodians on twenty-four-hour shifts	5.2	2.43
Police or security guard overnight stakeouts	2.7	2.10
Designate area where graffiti is allowed	1.8	1.86
Use of guard dogs	0.7	2.00
BEHAVIOURAL MEASURES		
Encourage positive relationships between staff and students	68.9	2.47
Parental restitution	61.7	2.19
Encourage staff to instill respect for private and public property	59.7	2.21
Vandal restitution	46.2	2.22
Ask neighbours and parents to report suspicious activities to police	44.4	1.77
Prosecution of vandals	36.0	2.13
Use of vandalism prevention materials	23.0	1.91
Community information programs	22.2	1.86
Conduct contests to increase students' pride in their school	16.3	2.07
Reward students or community members who inform on vandals	8.5	1.70
Give student government or council more authority	6.7	2.07
Vandalism prevention programs for students with problems	3.1	2.24
Student council pays cost of damage	3.1	2.04
Establish incentive program or vandalism fund	2.9	1.88

Table 2/Percentage of Schools Using Preventive Measures and Average Effectiveness Scores by Type of Vandalism

MEASURE AND TYPE OF VANDALISM	% USING	AVERAGE EFFECTIVENESS
VANDALISM IN GENERAL		
a) Student Programs		
Students leave school at completion of classes unless under supervision	79.4	2.59
Use of vandalism prevention materials	23.0	1.91
Use of special playgrounds	23.0	2.03
Contests to increase students' pride in school	16.3	2.07
Give student government or council more authority	6.7	2.07
Vandalism prevention program for students with problems	3.1	2.24
Student council pays cost of damage	3.1	2.04
Establish incentive program or vandalism fund	2.9	1.88
b) Teacher Involvement		
Adequate teacher supervision in hallways, etc.	95.2	2.66
Encourage positive relationships between staff and students	68.9	2.47
Encourage staff to instill respect for private and public property	59.7	2.21
c) Maintenance		
Clean and attractive schools	95.0	2.28
Repair visible damage quickly	92.2	2.34
d) Community Involvement		
Community use of schools	87.3	1.87
Supervision of community groups	53.1	2.27
Ask neighbours and parents to report suspicious activities to police	44.4	1.77
Community information programs	22.2	1.86
Rewards to students or community members who inform on vandals	8.5	1.70
e) Prosecution and Restitution		
Parental restitution	61.7	2.19

Table 2 (continued)

MEASURE	USE %	AVERAGE EFFECTIVENESS
Vandal restitution program	46.2	2.22
Prosecution of vandals	36.0	2.13
INTRUSION		
Regular police patrolling of school	48.5	1.77
Install an alarm system	28.9	2.66
Hire security guards	7.5	2.05
Put school custodians on twenty-four-hour shifts	5.2	2.43
Police or security guard overnight stakeouts	2.7	2.10
Use of guard dogs	0.7	2.00
BARRIERS TO ACCESS		
Ensure all windows and exterior doors are locked each evening	92.1	2.54
Increase exterior lighting	48.1	1.88
Leave interior lights on	51.6	1.94
Delineate school boundaries	42.3	1.21
Reduce access to roof	38.7	1.92
Install signs defining activities allowed on school property	32.0	1.41
Have signs directing visitors to main entrance	24.2	1.42
Use of gates or chains across driveways	17.5	1.82
Install signs identifying school's boundaries	12.1	1.05
Remove hardware from exterior doors	11.3	2.08
Have all visitors sign in and out of the building	8.1	1.38
THEFT		
Inventory of school equipment	92.9	1.82
Staff-key control system	79.1	2.22
A no-cash policy	65.1	2.41
Keep laboratory, audiovisual equipment under lock and key	62.3	2.28
Lock classroom doors at night	57.6	2.30

Table 2 (continued)

MEASURE	USE %	AVERAGE EFFECTIVENESS
Mark school property	43.0	2.02
Remove coins from machines	8.9	2.47
DAMAGE		
a) Glass Breakage		
Install break-resistant glazings	47.3	2.29
Remove stones and debris from schoolgrounds	47.1	1.97
Install protective screens over windows	27.2	2.46
Reduce number or size of windows	12.7	2.42
b) Graffiti		
Remove graffiti as soon as possible	91.4	2.31
Use graffiti-resistant materials	15.5	2.30
Designate area where graffiti is allowed	1.8	1.86
c) Damage to Interior Hardware		
Install damage-resistant washroom hardware	8.9	2.16
Cover or protect thermostats, etc.	40.0	2.23
Leave inside classroom and office doors open at night	28.1	2.24
Number of Respondents	3025	

Table 3/Percentage of Schools Using Preventive Measures and Average Effectiveness Scores by School Level

MEASURE	SCHOOL LEVEL					
	Primary	Inter-mediate	Senior	Primary	Inter-mediate	Senior
	% Using			Average Effectiveness Score		
Adequate teacher supervision in hallways, lunch rooms, etc.	96.2	98.4	88.8	2.69	2.66	2.45
Clean attractive schools	94.8	96.9	95.4	2.28	2.23	2.30
Inventory of school equipment	92.7	95.9	93.2	1.85	1.74	1.72
Repair visible damage quickly	91.8	95.3	93.0	2.32	2.31	2.44
Fnsure all windows and exterior doors are locked each evening	91.9	93.3	92.7	2.55	2.43	2.49
Remove graffiti as soon as possible	90.3	96.9	94.7	2.31	2.27	2.34
Community use of schools	86.8	91.2	88.1	1.95	1.56	2.25
Students leave school at completion of classes unless under supervision	86.9	79.8	40.3	2.62	2.55	2.23
Staff-key control system	76.7	86.5	88.3	2.22	2.20	2.22
Encourage positive relationships between staff and students	69.8	75.6	61.9	2.50	2.40	2.38
A no-cash policy	68.3	73.6	44.7	2.47	2.31	2.46
Keep laboratory, audiovisual equipment under lock and key	56.3	79.3	85.9	2.28	2.25	2.26
Parental restitution	58.4	73.6	74.4	2.20	2.21	2.30
Encourage staff to instill respect for private and public property	64.1	61.7	36.1	1.54	2.10	2.06

Table 3 (continued)

MEASURE	SCHOOL LEVEL					
	Primary	Inter-mediate	Senior	Primary	Inter-mediate	Senior
	% Using			Average Effectiveness Score		
Lock classroom doors at night	49.0	75.6	94.5	2.32	2.20	2.30
Supervision of community groups	54.4	51.3	46.9	2.31	2.18	2.05
Leave interior lights on	49.9	54.4	59.3	1.94	1.89	1.93
Regular police patrolling of school	49.9	48.2	41.4	1.74	1.94	1.85
Inrease exterior lighting	48.0	45.6	49.1	1.69	1.89	1.95
Install break-resistant glazings	46.5	53.4	48.7	2.28	2.37	2.28
Remove stones and debris from schoolgrounds	48.8	51.3	36.6	1.96	2.04	1.99
Vandal restitution program	39.9	54.4	76.0	2.23	2.20	2.20
Ask neighbours and parents to report suspicious activities to police	49.0	36.8	24.0	1.78	1.66	1.74
Mark school property	42.6	40.9	46.0	2.04	1.80	1.99
Delineate school boundaries	43.6	42.0	36.1	1.15	1.24	1.47
Cover or protect thermostats, etc.	35.6	53.4	57.5	2.27	2.30	2.09
Reduce access to the roof	38.9	34.7	39.9	1.89	2.10	1.99
Prosecute vandals who are apprehended	30.7	40.9	61.9	2.17	2.11	2.02
Install signs defining activities allowed on school property	33.7	29.0	24.4	1.44	1.15	1.86

Table 3 (continued)

MEASURE	SCHOOL LEVEL					
	Primary	Inter-mediate	Senior	Primary	Inter-mediate	Senior
	% Using			Average Effectiveness Score		
Install an alarm system	25.9	36.3	41.0	2.64	2.70	2.70
Leave inside classroom and office doors open at night	33.6	18.1	3.5	2.24	2.31	2.08
Install protective screens over windows	28.3	21.2	24.2	2.44	1.98	2.51
Have signs directing visitors to main entrance	20.4	31.1	41.4	1.43	1.73	1.41
Use of special playgrounds	28.7	4.1	1.3	2.02	1.67	1.00
Use of vandalism prevention materials	25.2	27.5	9.5	1.92	2.82	1.65
Community information programs	24.1	17.6	13.9	1.90	1.46	1.54
Use of gates or chains across driveways	16.8	12.4	23.1	1.77	2.00	1.96
Contests to increase students' pride in their school	18.1	14.0	7.9	2.11	1.88	2.39
Use of graffiti-resistant materials	13.7	17.6	24.2	2.26	2.39	2.38
Reduce number or size of windows	12.2	16.1	13.9	2.42	2.27	2.63
Install signs identifying school's boundaries	11.3	15.5	14.5	1.04	0.93	1.12
Remove hardware from exterior doors	10.4	13.0	15.4	2.08	2.17	2.05
Remove coins from machines	5.0	17.6	25.3	2.52	2.48	2.40
Install damage-resistant washroom hardware	8.1	10.9	12.8	2.20	2.00	2.08

Table 3 (continued)

MEASURE	SCHOOL LEVEL					
	Primary	Inter-mediate	Senior	Primary	Inter-mediate	Senior
	% Using			Average Effectiveness Score		
Rewards to students or community members who inform on vandals	8.4	8.3	9.3	1.78	1.50	1.46
Have all visitors sign in and out of the building	5.1	10.4	22.9	1.32	1.35	1.43
Hire security guards	6.8	6.7	11.2	1.95	2.23	2.24
Give student government or council more authority	3.2	14.0	21.8	2.17	2.17	1.96
Put school custodians on twenty-four-hour shifts	1.6	7.3	23.1	2.46	2.36	2.42
Vandalism prevention program for students with problems	3.2	4.1	2.4	2.27	2.17	2.11
Student council pays cost of damage	1.3	4.7	12.1	2.36	2.13	1.83
Establish incentive program or vandalism fund	2.3	9.3	3.7	2.05	1.64	1.62
Police or security guard overnight stakeouts	2.3	3.6	4.4	2.04	1.83	2.31
Designate area where graffiti is allowed	1.8	2.6	1.5	2.00	1.50	1.00
Use of guard dogs	0.8	-	0.7	2.00	-	2.00
Number of Respondents	2371	193	454			

Table 4/Percentage of Schools Using Preventive Measures and Average Effectiveness Scores by School Size

MEASURE	SCHOOL SIZE							
	0-199	200-499	500-999	1000+	0-199	200-499	500-999	1000+
	% Using				Average Effectiveness Score			
Adequate teacher supervision in hallways, lunch rooms, etc.	92.9	97.2	94.7	88.6	2.76	2.68	2.61	2.39
Clean and attractive schools	92.7	95.4	96 6	93.6	2.31	2.28	2.29	2.24
Inventory of school equipment	87.4	93.9	95.1	94.5	1.96	1.82	1.83	1.56
Repair visible damage quickly	88.5	92.6	93.9	94.5	2.32	2.32	2.42	2.34
Ensure all windows and exterior doors are locked each evening	86.4	93.1	93.9	95.3	2.61	2.55	2.49	2.38
Remove graffiti as soon as possible	83.6	92.4	95.6	94.1	2.31	2.32	2.31	2.28
Community use of schools	73.4	90.1	91.3	93.2	2.13	1.91	1.69	1.60
Students leave school at completion of classes unless under supervision	80.7	87.9	72.7	35.2	2.69	2.61	2.52	2.09
Staff-key control system	69.6	79.1	84.2	90.7	2.26	2.22	2.25	2.11
Encourage positive relationships between staff and students	63.0	70.3	73.8	62.7	2.56	2.47	2.46	2.34
A no-cash policy	64.5	68.6	63.7	46.2	2.36	2.40	2.46	2.43
Keep laboratory, audiovisual equipment under lock and key	46.2	61.6	71.0	86.4	2.34	2.29	2.28	2.14
Parental restitution	49.0	60.9	70.5	78.0	2.21	2.21	2.22	2.01
Encourage staff to instill respect for private and public property	58.8	63.6	59.5	36.9	2.34	2.21	2.12	2.01

Table 4 (continued)

MEASURE	SCHOOL SIZE							
	0-199	200-499	500-999	1000+	0-199	200-499	500-999	1000+
	% Using				Average Effectiveness Score			
Lock classroom doors at night	42.2	52.0	72.9	96.2	2.33	2.30	2.34	2.23
Supervision of community groups	46.4	56.2	52.3	50.9	2.45	2.31	2.13	1.90
Leave interior lights on	46.4	51.4	54.7	58.1	1.93	1.94	1.94	1.93
Regular police patrolling of school	43.9	51.4	46.7	45.3	1.82	1.75	1.78	1.78
Increase exterior lighting	45.2	48.1	51.5	46.6	1.97	1.83	1.76	1.94
Install break-resistant glazings	32.7	48.1	56.4	55.5	2.31	2.26	2.33	2.27
Remove stones and debris from schoolgrounds	42.3	49.3	47.9	42.0	2.02	1.96	1.94	1.98
Vandal restitution program	29.7	42.9	57.6	82.2	2.26	2.25	2.23	2.08
Ask neighbours and parents to report suspicious activities to police	44.5	48.4	39.9	28.4	1.90	1.76	1.69	1.72
Mark school property	36.2	45.1	42.1	49.2	1.95	2.07	1.92	2.03
Delineate school boundaries	38.9	43.9	41.7	42.0	1.31	1.13	1.22	1.45
Cover or protect thermostats, etc.	24.9	39.1	48.7	62.7	2.22	2.27	2.26	2.05
Reduce access to the roof	32.7	39.3	41.7	42.8	1.93	1.87	2.04	1.88
Prosecute vandals who are apprehended	21.9	33.2	44.3	70.8	2.20	2.19	2.12	1.89
Install signs defining activities allowed on school property	26.6	33.6	35.4	25.4	1.50	1.43	1.35	1.31
Install an alarm system	17.4	26.8	39.6	45.8	2.58	2.67	2.64	2.73

Table 4 (continued)

MEASURE	SCHOOL SIZE							
	0-199	200-499	500-999	1000+	0-199	200-499	500-999	1000+
	% Using				Average Effectiveness Score			
Leave inside classroom and office doors open at night	40.0	30.9	19.1	1.3	2.15	2.30	2.15	-
Install protective screens over windows	28.9	26.8	27.9	23.7	2.31	2.51	2.44	2.51
Having signs directing visitors to main entrance	13.3	21.3	35.4	44.1	1.50	1.46	1.36	1.32
Use of special playgrounds	23.9	26.9	19.9	1.7	2.02	2.05	1.94	2.00
Use of vandalism prevention materials	23.9	25.1	21.0	11.0	2.03	1.88	1.86	1.80
Community information programs	20.1	23.3	23.9	15.7	2.17	1.79	1.81	1.68
Use of gates or chains across driveways	14.3	15.5	23.3	24.6	1.96	1.77	1.75	2.02
Contests to increase student's pride in their school	13.8	17.9	17.9	7.6	2.10	2.12	1.95	1.71
Use of graffiti-resistant materials	10.3	14.8	18.2	26.3	2.38	2.24	2.33	2.36
Reduce number or size of windows	7.8	14.6	10.5	17.4	2.62	2.40	2.45	2.28
Install signs identifying school's boundaries	9.6	12.7	12.8	12.7	1.02	1.04	1.02	1.21
Remove hardware from exterior doors	9.6	10.0	14.0	17.8	2.06	2.13	2.00	2.12
Remove coins from machines	3.5	6.9	11.9	28.0	2.72	2.48	2.45	2.37
Install damage-resistant wash-room hardware	7.1	8.3	10.6	13.6	2.26	2.14	2.25	1.93

Table 4 (continued)

MEASURE	SCHOOL SIZE							
	0-199	200-499	500-999	1000+	0-199	200-499	500-999	1000+
	% Using				Average Effectiveness Score			
Rewards to students or community members who inform on vandals	6.3	8.8	9.7	9.3	1.95	1.73	1.55	1.50
Have all visitors sign in and out of the building	4.0	5.9	13.6	20.3	1.58	1.14	1.61	1.37
Hire security guards	6.3	7.2	7.8	11.4	2.18	1.92	2.00	2.29
Give student government or council more authority	4.3	3.6	12.3	19.5	2.41	2.20	2.03	1.83
Put school custodians on twenty-four-hour shifts	1.5	1.4	11.1	25.9	2.17	2.50	2.43	2.42
Vandalism prevention program for students with problems	2.5	2.9	5.3	1.3	2.25	2.32	2.19	1.67
Student council pays cost of damage	2.0	1.5	4.9	12.7	2.20	2.38	1.78	1.96
Establish incentive program or vandalism fund	1.5	2.7	4.6	4.2	2.00	2.54	1.67	1.43
Police or security guard overnight stakeouts	2.3	2.2	3.4	5.9	1.92	2.17	2.11	2.09
Designate area where graffiti is allowed	2.8	1.6	1.4	1.3	2.00	2.16	1.00	0.50
Use of guard dogs	0.8	0.6	0.7	0.9	1.50	1.83	3.00	1.00
Number of Respondents	602	1600	587	236				

Table 5/Degree of Effectiveness of Preventive Measures Used

MEASURE	EFFECTIVENESS Not at All	Slightly	Moderately	Very	Don't Know	Number of Respondents
	Percentage					
Adequate teacher supervision in hallways, lunch rooms, etc.	0.2	4.0	24.6	66.8	4.5	2648
Clean and attractive schools	2.4	10.5	34.0	40.0	13.0	2655
Inventory of school equipment	11.4	12.4	23.9	22.4	29.9	2522
Repair visible damage quickly	1.5	9.6	32.7	41.7	14.5	2582
Ensure all windows and exterior doors are locked each evening	1.6	5.6	24.3	55.0	13.5	2529
Remove graffiti as soon as possible	1.4	10.8	34.0	41.1	12.6	2538
Community use of schools	9.8	14.6	32.0	23.7	19.9	2396
Students leave school at completion of classes unless under supervision	0.4	5.2	27.0	60.8	6.5	2181
Staff-key control system	6.0	9.4	24.9	38.8	20.9	2190
Encourage positive relationships between staff and students	0.4	6.3	33.8	49.7	9.8	1871
A no-cash policy	2.1	8.5	23.3	44.9	21.1	1816
Keep laboratory, audiovisual equipment under lock and key	3.0	10.8	30.4	39.8	16.1	1719
Parental restitution	1.9	17.7	33.6	39.2	7.6	1725
Encourage staff to instill respect for private and public property	0.4	13.9	40.4	32.4	12.9	1655
Lock classroom doors at night	3.6	9.3	28.8	41.7	16.5	1598
Supervision of community groups	2.3	12.9	33.5	41.4	9.9	1452

Table 5 (continued)

MEASURE	EFFECTIVENESS					
	Not At All	Slightly	Moderately	Very	Don't Know	Number of Respondents
	Percentage					
Leave interior lights on	3.6	19.4	37.6	21.5	17.9	1431
Regular police patrolling of school	3.6	29.8	37.6	16.8	12.2	1375
Increase exterior lighting	5.3	21.6	42.9	21.2	8.9	1366
Install break-resistant glazings	1.9	12.1	38.5	43.3	4.2	1368
Remove stones and debris from schoolgrounds	3.1	20.7	38.6	24.3	13.2	1340
Vandal restitution program	1.2	15.3	35.4	37.7	10.3	1306
Ask neighbours and parents to report suspicious activities to police	6.4	28.3	32.3	20.9	12.1	1253
Mark school property	3.7	12.1	27.7	20.6	35.9	1215
Delineate school boundaries	26.1	20.9	24.1	9.2	19.8	1168
Cover or protect thermostats, etc.	2.4	14.1	32.2	39.2	12.2	1093
Reduce access to the roof	6.0	21.5	35.6	25.7	11.2	1058
Prosecute vandals who are apprehended	2.4	18.9	30.1	34.7	13.8	990
Install signs defining activities allowed on school property	16.7	30.0	28.5	12.0	12.7	897
Install an alarm system	1.6	3.8	17.9	65.6	11.0	809
Leave inside classroom and office doors open at night	3.2	9.4	24.3	32.0	31.1	727
Install protective screens over windows	2.4	7.5	29.5	55.5	5.0	796
Have signs directing visitors to main entrance	16.3	29.7	33.7	9.8	10.4	673
Use of special playgrounds	6.3	14.3	30.9	28.8	19.7	624

Table 5 (continued)

MEASURE	EFFECTIVENESS Percentage					
	Not At All	Slightly	Moderately	Very	Don't Know	Number of Respondents
Use of vandalism prevention materials	1.1	21.7	42.1	16.0	19.1	649
Community information programs	2.1	26.2	37.4	18.1	16.2	634
Use of gates or chains across driveways	10.0	23.3	36.1	25.9	4.8	502
Contest to increase students' pride in their school	1.1	17.2	45.0	25.2	11.5	460
Use of graffiti-resistant materials	0.7	10.4	41.4	39.1	8.3	432
Reduce number or size of windows	1.7	10.8	28.2	53.3	6.1	362
Install signs identifying school's boundaries	28.3	32.1	22.5	4.9	12.1	346
Remove hardware from exterior doors	2.9	19.0	33.4	31.8	12.9	311
Remove coins from machines	1.6	10.0	20.9	53.0	14.5	249
Install damage-resistant washroom hardware	0.8	14.8	46.5	31.3	6.6	243
Rewards to students or community members who inform on vandals	7.6	23.7	22.5	17.4	28.8	236
Have all visitors sign in and out of the building	20.3	27.9	33.3	10.8	7.7	222
Hire security guards	4.0	21.3	28.7	32.7	13.4	202
Give student government or council more authority	2.8	22.3	31.3	34.1	9.5	179
Put school custodians on twenty-four-hour shifts	1.5	5.9	38.2	49.3	5.1	136

Table 5 (continued)

MEASURE	EFFECTIVENESS Not At All	Slightly	Moderately	Very	Don't Know	Number of Respondents
	Percentage					
Vandalism prevention program for students with problems	0.0	11.8	47.1	34.1	7.1	85
Student council pays cost of damage	3.4	20.5	38.6	30.7	6.8	88
Establish incentive program or vandalism fund	8.5	12.2	43.9	19.5	15.9	82
Police or security guard overnight stakeouts	6.5	20.8	22.1	41.6	9.1	77
Designate area where graffiti is allowed	8.7	15.2	32.6	21.7	21.7	46
Use of guard dogs	0.0	26.7	26.7	26.7	20.3	15

Table 6/Type of Alarm System by School Level and School Size

TYPE	SCHOOL LEVEL			
	Primary	Intermediate	Senior	Total
	Percentage			
Audio	21.7	28.0	16.0	21.1
V.H.F./ultrasonic/ infrared	20.3	24.7	27.5	22.1
Mechanical	49.3	41.9	44.9	47.8
Combination of above and other	4.3	1.1	8.4	4.8
Don't know	4.4	4.3	3.1	4.1
Total	100.00	100.0	100.0	100.0
Number of Respondents with alarms	801	93	225	119

TYPE	SCHOOL SIZE				
	0-199	200-499	500-999	1000+	Total
	Percentage				
Audio	16.2	23.0	21.8	16.2	21.0
V.H.F./ultrasonic/ infrared	16.9	20.9	24.9	24.9	22.1
Mechanical	56.6	48.0	44.0	46.3	47.8
Combination of above and other	2.9	4.1	5.5	8.8	4.9
Don't know	7.4	4.1	3.8	2.2	4.2
Total	100.0	100.0	100.0	100.0	100.0
Number of Respondents with alarms	136	561	293	136	1126

Table 7/Total Cost of Vandalism by School Level [1]

AMOUNT OF VANDALISM[2]	SCHOOL LEVEL			
	Primary	Intermediate	Senior	Total
	Percentage			
No vandalism [3]	6.7	2.1	0.7	5.5
$1 - $199	20.6	6.2	2.6	17.0
$200 - $499	26.2	22.2	7.7	23.2
$500 - $999	18.6	21.7	13.9	18.1
$1000 - $1999	10.3	16.1	24.0	12.7
$2000 - $4999	6.1	13.5	23.1	9.2
$5000+	1.7	4.2	14.1	3.6
No reply	9.8	14.0	13.9	10.7
Total	100.0	100.0	100.0	100.0
Number of Respondents	2371	193	454	3018

1 Calculated on a per school basis.

2 Respondents stated actual dollar cost.

3 The no-vandalism category was not on the questionnaire. Some respondents stated their vandalism costs were nil.

Table 8/Total Cost of Vandalism by School Size [1]

AMOUNT OF VANDALISM[2]	SCHOOL SIZE				
	0-199	200-499	500-999	1000+	Total
	Percentage				
No vandalism [3]	14.1	4.4	1.9	0.4	5.5
$1 - $199	30.0	18.2	6.3	1.3	16.9
$200 - $499	26.7	26.9	16.5	3.8	23.1
$500 - $999	10.8	21.2	21.5	7.6	18.1
$1000 - $1999	5.2	10.9	22.7	19.9	12.7
$2000 - $4999	2.7	6.4	15.8	27.5	9.2
$5000+	1.0	1.8	4.6	22.5	3.8
No reply	9.5	10.2	10.7	17.0	10.7
Total	100.0	100.0	100.0	100.0	100.0
Number of Respondents	602	1600	587	236	3025

Table 9/Involvement of Community Groups or Persons to Reduce School Vandalism by School Size

GROUPS OR PERSONS	0-199	200-499	500-999	1000+	Total
			% Using		
Police	68.8	75.8	79.7	87.7	76.1
Individual Parents	48.0	57.3	65.4	64.0	57.6
Parent Associations	18.4	24.7	23.5	19.9	22.8
Children's Aid Society	13.3	15.2	20.3	19.5	16.1
Court	5.3	10.9	18.4	37.7	13.4
Social Services (Municipal)	7.5	9.1	13.5	16.9	10.2
Social Services (Provincial)	4.5	4.4	4.8	9.7	4.9
Prison Staff	0.2	0.5	0.3	1.3	0.5
Other (students, neighbours, etc.)	3.7	4.6	4.4	4.7	4.4
Number of Respondents	602	1600	587	236	3025

Table 10/Involvement of Community Groups or Persons to Reduce School Vandalism by School Level

GROUPS OR PERSONS	Primary	Intermediate	Senior	Total
Police	74.4	80.8	82.8	76.1
Individual Parents	57.1	59.1	59.3	57.6
Parent Associations	25.7	10.9	12.8	22.8
Children's Aid	15.0	22.8	19.4	16.2
Court	9.4	18.7	31.9	13.4
Social Services (Municipal)	8.9	18.7	13.4	10.2
Social Services (Provincial)	4.0	7.8	8.1	4.9
Prison Staff	0.4	0.5	0.7	0.5
Other (students, neighbours, etc.)	4.3	4.1	5.3	4.4
Number of Respondents	2371	193	454	3018